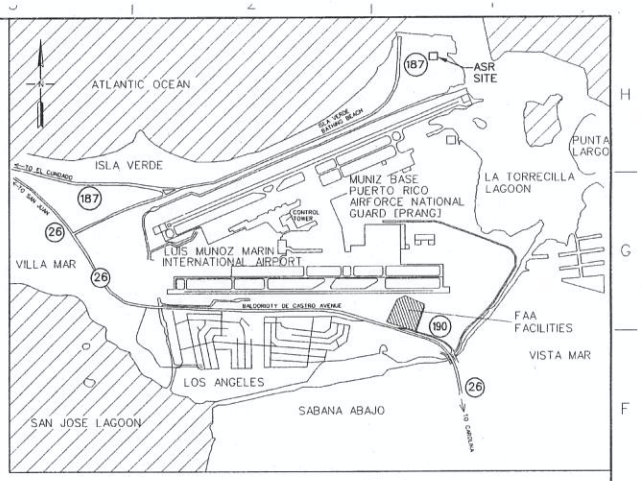
Attachment 2-B

Drawings

Solicitation No.: DTFAEN-11-R-00060

Construction of the

Airport Surveillance Radar-8 (ASR-8) Building Replacement Project
Luis Munoz Marin International Airport
San Juan, Puerto Rico



VICINITY MAP
NOT TO SCALE

ASR - SAN JUAN, PUERTO RICO
BUILDING REPLACEMENT PROJECT

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS — EASTERN SERVICE AREA

ASR
COVER SHEET AND VICINITY MAP

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

REVIEWED BY	SUBMITTED BY: Neil Bolen, PROJECT ENGINEER	APPROVED BY: Robert S. Maddox, MGR: ENGINEERING - ATLANTA	
DESIGNED: NB	ISSUED BY: ENGINEERING SERVICES SURV/WEATHER	DATE: 04/17/2010	JCN: 1000073
DRAWN: DS		DRAWING NO: SJU-D-1000073-G001	REV
CHECKED			

ISSUED FOR CONSTRUCTION

LIST OF DRAWINGS

CONSTRUCTION OF THE
AIRPORT SURVEILLANCE RADAR-8 BUILDING REPLACEMENT PROJECT

LUIS MUNOZ MARIN INTERNATIONAL AIRPORT
SAN JUAN, PR

Number	Date	No. of Pages	Title
SJU-D-100073-G001	04/17/2010	1	ASR Building Replacement Project Cover Sheet and Vicinity Map
SJU-D-100073-G002	04/17/2010	1	ASR Building Replacement Project Drawing Index Sheet
SJU-D-100073-D001	04/17/2010	1	ASR Building Replacement Project Demolition Site Plan
SJU-D-100073-D002	04/17/2010	1	ASR Building Replacement Project Demolition Plan
SJU-D-100073-C001	04/17/2010	1	ASR Building Replacement Project Site Plan
SJU-D-100073-C002	04/17/2010	1	ASR Building Replacement Project Site Details and Sections
SJU-D-100073-C003	04/17/2010	1	ASR Building Replacement Project Waveguide Sections and Ductbank Details
SJU-D-100073-A001	04/17/2010	1	ASR Building Replacement Project Building Plan and Wall Openings
SJU-D-100073--A002	04/17/2010	1	ASR Building Replacement Project Building Elevations
SJU-D-100073--A003	04/17/2010	1	ASR Building Replacement Project Sections and Details 1 of 2
SJU-D-100073--A004	04/17/2010	1	ASR Building Replacement Project Sections and Details 2 of 2
SJU-D-100073--E001	04/17/2010	1	ASR Building Replacement Project Electrical Site Plan

SJU-D-100073--E002	04/17/2010	1	ASR Building Replacement Project Electrical Power Plan
SJU-D-100073--E003	04/17/2010	1	ASR Building Replacement Project Grounding Plan
SJU-D-100073--E004	04/17/2010	1	ASR Building Replacement Project Single Line Diagram
SJU-D-100073--E005	04/17/2010	1	ASR Building Replacement Project Lighting Plan and Electrical Details
SJU-D-100073--E006	04/17/2010	1	ASR Building Replacement Project Panel Schedules
SJU-D-100073--E007	04/17/2010	1	ASR Building Replacement Project Electrical Details and Schedules Sheet 1 of 2
SJU-D-100073--E008	04/17/2010	1	ASR Building Replacement Project Electrical Details and Schedules Sheet 2 of 2
SJU-D-100073-E009	04/17/2010	1	ASR Building Replacement Project Earth Ground Resistance Testing Instructions and Procedures
SJU-D-100073-E010	04/17/2010	1	ASR Building Replacement Project Stairway and Landing Power and Lighting Modification Notes and Details
SJU-D-100073-E011	04/17/2010	1	ASR Building Replacement Project P2A, Dec 550, PM340, and M340 Connections for ERMS
SJU-D-100073-E012	04/17/2010	1	ASR Building Replacement Project ERMS Panels P1, P3, P4, and P5 Interconnection Diagram
SJU-D-100073-E013	04/17/2010	1	ASR Building Replacement Project ERMS Panels Floor Plan
SJU-D-100073--M001	04/17/2010	1	ASR Building Replacement Project Building HVAC Plans and Sections
SJU-D-100073--M002	04/17/2010	1	ASR Building Replacement Project Mechanical Schedules
SJU-D-100073--S001	04/17/2010	1	ASR Building Replacement Project Foundation Plans and Details

SJU-D-100073-S002	04/17/2010	1	ASR Building Replacement Project Miscellaneous Foundation Plans and Details
SJU-D-100073-S003	04/17/2010	1	ASR Building Replacement Project Concrete Roof Reinforcing Plan and Sections

DRAWING LIST

DWG NO.	REV.	DATE	DESCRIPTION
SJU-D-1000073-G001		04/17/2010	COVER SHEET AND VICINITY MAP
SJU-D-1000073-G002		04/17/2010	BUILDING REPLACEMENT PROJECT DRAWING INDEX SHEET
SJU-D-1000073-C001		04/17/2010	BUILDING REPLACEMENT PROJECT SITE DEMOLITION PLAN
SJU-D-1000073-C002		04/17/2010	BUILDING REPLACEMENT PROJECT DEMOLITION PLAN
SJU-D-1000073-C003			
		04/17/2010	BUILDING REPLACEMENT PROJECT SITE PLAN
SJU-D-1000073-D001		04/17/2010	BUILDING REPLACEMENT PROJECT SITE DETAILS AND SECTIONS
SJU-D-1000073-D002		04/17/2010	BUILDING REPLACEMENT PROJECT WAVEGUIDE SECTIONS AND DUCTBANK DETAILS
SJU-D-1000073-A001		04/17/2010	BUILDING REPLACEMENT PROJECT BUILDING PLAN AND WALL OPENINGS
SJU-D-1000073-A002		04/17/2010	BUILDING REPLACEMENT PROJECT BUILDING ELEVATIONS
SJU-D-1000073-A003		04/17/2010	BUILDING REPLACEMENT PROJECT SECTIONS AND DETAILS 1 OF 2
SJU-D-1000073-A004		04/17/2010	BUILDING REPLACEMENT PROJECT SECTIONS AND DETAILS 2 OF 2
SJU-D-1000073-S000		04/17/2010	BUILDING REPLACEMENT PROJECT STRUCTURAL GENERAL NOTES
SJU-D-1000073-S001		04/17/2010	BUILDING REPLACEMENT PROJECT FOUNDATION PLAN AND DETAILS
SJU-D-1000073-S002		04/17/2010	BUILDING REPLACEMENT PROJECT MISCELLANEOUS FOUNDATIONS WALL DETAILS AND PLANS
SJU-D-1000073-S003		04/17/2010	BUILDING REPLACEMENT PROJECT CONCRETE ROOF AND REINFORCING PLAN
SJU-D-1000073-M001		04/17/2010	BUILDING REPLACEMENT PROJECT HVAC PLANS AND SECTIONS
SJU-D-1000073-M002		04/17/2010	BUILDING REPLACEMENT PROJECT MECHANICAL SCHEDULES AND SCHEMATIC FLOW DIAGRAM
SJU-D-1000073-E001		04/17/2010	BUILDING REPLACEMENT PROJECT ELECTRICAL SITE PLAN
SJU-D-1000073-E002		04/17/2010	BUILDING REPLACEMENT PROJECT ELECTRICAL POWER PLAN
SJU-D-1000073-E003		04/17/2010	BUILDING REPLACEMENT PROJECT GROUNDING PLAN
SJU-D-1000073-E004		04/17/2010	BUILDING REPLACEMENT PROJECT SINGLE LINE DIAGRAM
SJU-D-1000073-E005		04/17/2010	BUILDING REPLACEMENT PROJECT LIGHTING PLAN AND ELECTRICAL DETAILS
SJU-D-1000073-E006		04/17/2010	BUILDING REPLACEMENT PROJECT PANEL SCHEDULES
SJU-D-1000073-E007		04/17/2010	BUILDING REPLACEMENT PROJECT ELECTRICAL DETAILS AND SCHEDULES SHEET 1 OF 2
SJU-D-1000073-E008		04/17/2010	BUILDING REPLACEMENT PROJECT ELECTRICAL DETAILS AND SCHEDULES SHEET 2 OF 2
SJU-D-1000073-E009		04/17/2010	BUILDING REPLACEMENT PROJECT EARTH GROUND RESISTANCE TESTING INSTRUCTIONS AND PROCEDURES
SJU-D-1000073-E010		04/17/2010	BUILDING REPLACEMENT PROJECT STAIRWAY AND LANDINGS POWER AND LIGHTING MODIFICATIONS NOTES AND DETAILS
SJU-D-1000073-E011		04/17/2010	BUILDING REPLACEMENT PROJECT P2A,DEC 340, PM340 AND M340 CONNECTIONS FOR ERMS
SJU-D-1000073-E012		04/17/2010	BUILDING REPLACEMENT PROJECT ERMS PANELS P1,P3, P4 AND P5 INTERCONNECTION DIAGRAM
SJU-D-1000073-E013		04/17/2010	BUILDING REPLACEMENT PROJECT ERMS PANELS FLOOR PLAN

ABBREVIATIONS

A/D - ACCESS DOOR
A.F.F. - ABOVE FINISHED FLOOR
BD - BAROMETRIC DAMPER
BOD - BOTTOM OF DUCT
CFM - CUBIC FEET PER MINUTE (ACTUAL)
CONN - CONNECTION
DS - DUCT SUPPORT
ELECT - ELECTRICAL
EMERG - EMERGENCY
FIN - FINISH
FLA - FULL LOAD AMPS
FLEX - FLEXIBLE
FLR - FLOOR
LRA - LOCKED ROTOR AMPS
M - MOTOR
MAX - MAXIMUM
MIN - MINIMUM
OA - OUTSIDE AIR
OPER - OPERATION/OPERATING
RA - RETURN AIR
REG - REGISTER
RLA - RATED LOAD AMPS
SP - STATUS PANEL
SA - SUPPLY AIR
T - ROOM THERMOSTAT
THK - THICK
TOD - TOP OF DUCT
TYP - TYPICAL
VD - VOLUME DAMPER
W/ - WITH

SYMBOLS LEGEND

BRANCH CIRCUIT HOMERUN TO PANELBOARD. SLASH MARKS INDICATE NUMBER OF CONDUCTORS IN CONDUIT. (3/4"C MINIMUM)

BRANCH CIRCUIT PANELBOARD 208Y/120V. 3PH. 4W. 60HZ

DUPLEX RECEPTACLE. 20A.125V+14" AFF FLUSH MOUNTED UNLESS NOTE OTHERWISE GFI-GROUND FAULT INTERRUPTING. WP-WEATHERPROOF

S_3 3-WAY SWITCH. +48" AFF FLUSH MOUNTED "b" INDICATES FIXTURE CONTROL

Ⓜ MOTION SENSING LIGHTING CONTROLS WP. BRK ELECTRONICS CAT #HB830 WITH WP JUNCTION BOX

PHOTO ELECTRIC CONTROL SWITCH. WP TORK CAT #3010 WITH WP JUNCTION BOX

S_a SINGLE POLE SWITCH +48" AFF FLUSH MOUNTED "a" INDICATES FIXTURE CONTROLLED.

BRACKET FIX.-LETTER INDICATES TYPE

FLUORESCENT FIX. "B" INDICATES TYPE "a" INDICATES SWITCH CONTROL "6" INDICATES CIRCUIT NUMBER AT PANELBOARD

DISCONNECT SWITCH

COMBINATION STARTER

AC MOTOR. HP AS NOTED

SPDT SINGLE POLE DOUBLE THROW (CENTER OFF)

XFMER TRANSFORMER

GFM GOVERNMENT FURNISHED MATERIAL

AFF ABOVE FINISHED FLOOR

GRD GREEN INSULATED GROUND

SCE SITE CONSTRUCTION ENGINEER

GFI INDICATES GROUND FAULT INTERRUPTER

WP INDICATES WEATHERPROOF ENCLOSURE

RGS RIGID GALVANIZED STEEL

BSDC BARE SOLID DRAWN COPPER

S SINGLE POINT ELECTRONIC GROUND PLATE

M MAIN GROUNDING PLATE

MULTIPOINT GROUND PLATE

SPECIAL PURPOSE RECEPTACLE WITH NEMA CONFIGURATION INDICATED

EX EXIT LIGHT FIXTURE

EM EMERGENCY LIGHTING FIXTURE WITH FLEXIBLE CORD AND NEMA L5-20P LOCKING PLUG

L5-20R

— G — BARE COPPER GROUNDING COUNTERPOISE

------- UNDERGROUND/UNDERSLAB CONDUIT

GROUND ROD CONNECTION

COPPER CLAD GROUND ROD

COPPER CLAD GROUND ROD IN FIBERGLASS/POLYESTER BOX

MOTOR

INDICATES NEW WORK

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS **EASTERN SERVICE AREA**

ASR

BUILDING REPLACEMENT PROJECT
DRAWING INDEX SHEET

SAN JUAN LUIS MUNOZ MARIN INTL AIRPORT PR

REVIEWED BY | SUBMITTED BY: PROJECT ENGINEER | APPROVED BY: MGR. ENGINEERING - ATLANTA

DESIGNED NB | DRAWN DS | CHECKED | ISSUED BY ENGINEERING SERVICES SURV/WEATHER | DATE 04/17/2010 | JCN 1000073 | DRAWING NO SJU-D-1000073-G002 | REV

ISSUED FOR: CONSTRUCTION

EDW: SJU-D-1000073-G002.dgn

SCHEDULE OF LIGHTING FIXTURES

TYPE	DESCRIPTION	MANUFACTURER & P/N
A	4-32W, T8 LAMPS. FLUORESCENT FIXTURES FOR PENDANT MOUNTING WITH LOW BRIGHTNESS WRAP AROUND & ACRYLIC LENS, FIXTURES 48"X18", MOUNTED 10'-0" A.F.F. CONDUIT RUNS SHALL BE ATTACHED TO CEILING.	* LITHONIA SB432120GEB10ISRIF1 WITH LAMPS AND RFI FILTER (OR EQUAL)
C	35 WATT HPS WEATHER TIGHT WALL BRACKET UNITS, CAST ALUMINUM HOUSING, DARK BRONZE FINISH, POLYCARBONATE UV-STABILIZED DIFFUSER AND PHOTO CELL. INSTALL ABOVE DOOR.	LITHONIA TWS35S120PELPI WITH LAMP (OR EQUAL)
EX	LED, EMERGENCY EXIT LIGHTING FIXTURE WITH 90 MINUTE NICKEL CADMIUM BATTERY.	LITHNONIA LHQMLEDR (OR EQUAL)
EM	EMERGENCY LIGHT SET. 2-LED LAMP HEADS WITH 12 SERIES/PARALLEL LEDS. WITH 90 MINUTE NICKEL CADMIUM BATTERY, MOUNT 8'-0" A.F.F.	LITHONIA ELM2LED (OR EQUAL)

* FLUORESCENT LAMP SHALL BE NO MORE THAN 32WATT. MIN. 2925 LUMENS NOMINAL LIGHT OUTPUT. WHITE EMITTED LIGHT. THE LAMPS SHALL HAVE AN AVERAGE RATED LIFE OF 20,000 HOURS. LAMPS SHALL BE GE TYPE F32T8/SPX35 OR EQUAL.

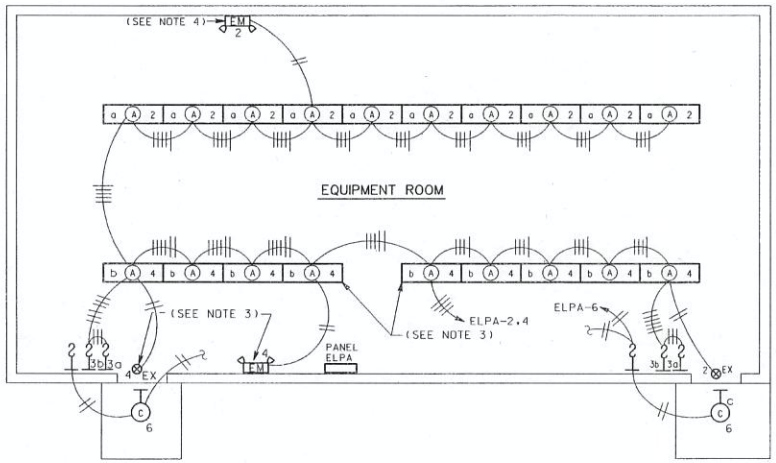
* SINGLE UNIT DOUBLE-STEM CANOPY TYPE SUPPORTS ARE NOT ACCEPTABLE FOR MOUNTING THE FLUORESCENT FIXTURES.

NOTES

1. ALL ITEMS SHOWN ON THIS DRAWING ARE NEW.
2. ALL ELECTRICAL TERMINATIONS (CONTROL OR POWER) SHALL BE IN ACCORDANCE WITH MANUFACTURER'S DRAWINGS AND INSTRUCTION MANUAL AVAILABLE AT THE SITE.
3. COORDINATE LOCATION OF LIGHTS AND WIREWAY WITH DUCTWORK AND WAVEGUIDE.
4. CONTRACTOR SHALL WIRE EMERGENCY LIGHTS ON UNSWITCHED LEG OF THE LIGHTING CIRCUIT.
5. ALL LIGHTING AND POWER CONDUITS SHALL BE SURFACE MOUNTED.

LEGEND

- BRANCH CIRCUIT HOMERUN TO PANELBOARD. SLASH MARKS INDICATE NUMBER OF CONDUCTORS IN CONDUIT. (3/4"C MINIMUM)
- BRANCH CIRCUIT PANELBOARD 208Y/120V. 3PH. 4W. 60HZ
- DUPLEX RECEPTACLE. 20A.125V+14" AFF FLUSH MOUNTED UNLESS NOTE OTHERWISE GFI-GROUND FAULT INTERRUPTING. WP-WEATHERPROOF
- 3-WAY SWITCH. +48" AFF FLUSH MOUNTED "b" INDICATES FIXTURE CONTROL
- MOTION SENSING LIGHTING CONTROLS WP. BRK ELECTRONICS CAT #HB830 WITH WP JUNCTION BOX
- PHOTO ELECTRIC CONTROL SWITCH. WP TORK CAT #3010 WITH WP JUNCTION BOX
- SINGLE POLE SWITCH +48" AFF FLUSH MOUNTED "a" INDICATES FIXTURE CONTROLLED.
- BRACKET FIX.-LETTER INDICATES TYPE
- FLUORESCENT FIX. "B" INDICATES TYPE "a" INDICATES SWITCH CONTROL "6" INDICATES CIRCUIT NUMBER AT PANELBOARD
- DISCONNECT SWITCH
- COMBINATION STARTER
- 1/2 AC MOTOR. HP AS NOTED
- SPDT SINGLE POLE DOUBLE THROW (CENTER OFF)
- XFMER TRANSFORMER
- GFM GOVERNMENT FURNISHED MATERIAL
- AFF ABOVE FINISHED FLOOR
- GRD GREEN INSULATED GROUND
- SCE SITE CONSTRUCTION ENGINEER
- GFI INDICATES GROUND FAULT INTERRUPTER
- WP INDICATES WEATHERPROOF ENCLOSURE
- RGS RIGID GALVANIZED STEEL
- BSDC BARE SOLID DRAWN COPPER
- S SINGLE POINT ELECTRONIC GROUND PLATE
- M MAIN GROUNDING PLATE
- MULTIPOINT GROUND PLATE
- SPECIAL PURPOSE RECEPTACLE WITH NEMA CONFIGURATION INDICATED
- EX EXIT LIGHT FIXTURE
- EM EMERGENCY LIGHTING FIXTURE WITH FLEXIBLE CORD AND NEMA L5-20P LOCKING PLUG
- L5-20R — G — BARE COPPER GROUNDING COUNTERPOISE
- UNDERGROUND/UNDERSLAB CONDUIT
- GROUND ROD CONNECTION
- COPPER CLAD GROUND ROD
- COPPER CLAD GROUND ROD IN FIBERGLASS/POLYESTER BOX



1 / E005 LIGHTING PLAN

4 0 4 8

1/4" = 1'-0"

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS — EASTERN SERVICE AREA

ASR

BUILDING REPLACEMENT PROJECT
LIGHTING PLAN AND ELECTRICAL DETAILS

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

REVIEWED BY	SUBMITTED BY	APPROVED BY
	Neil Balon, PROJECT ENGINEER	Robert B. Bradley, MGR. ENGINEERING - ATLANTA

DESIGNED	NB	ISSUED BY	DATE	04/17/2010	JCN	1000073
DRAWN	DS	ENGINEERING SERVICES SURV/WEATHER	DRAWING NO	SJU-D-1000073-E005		REV
CHECKED						

ISSUED FOR CONSTRUCTION 2400350

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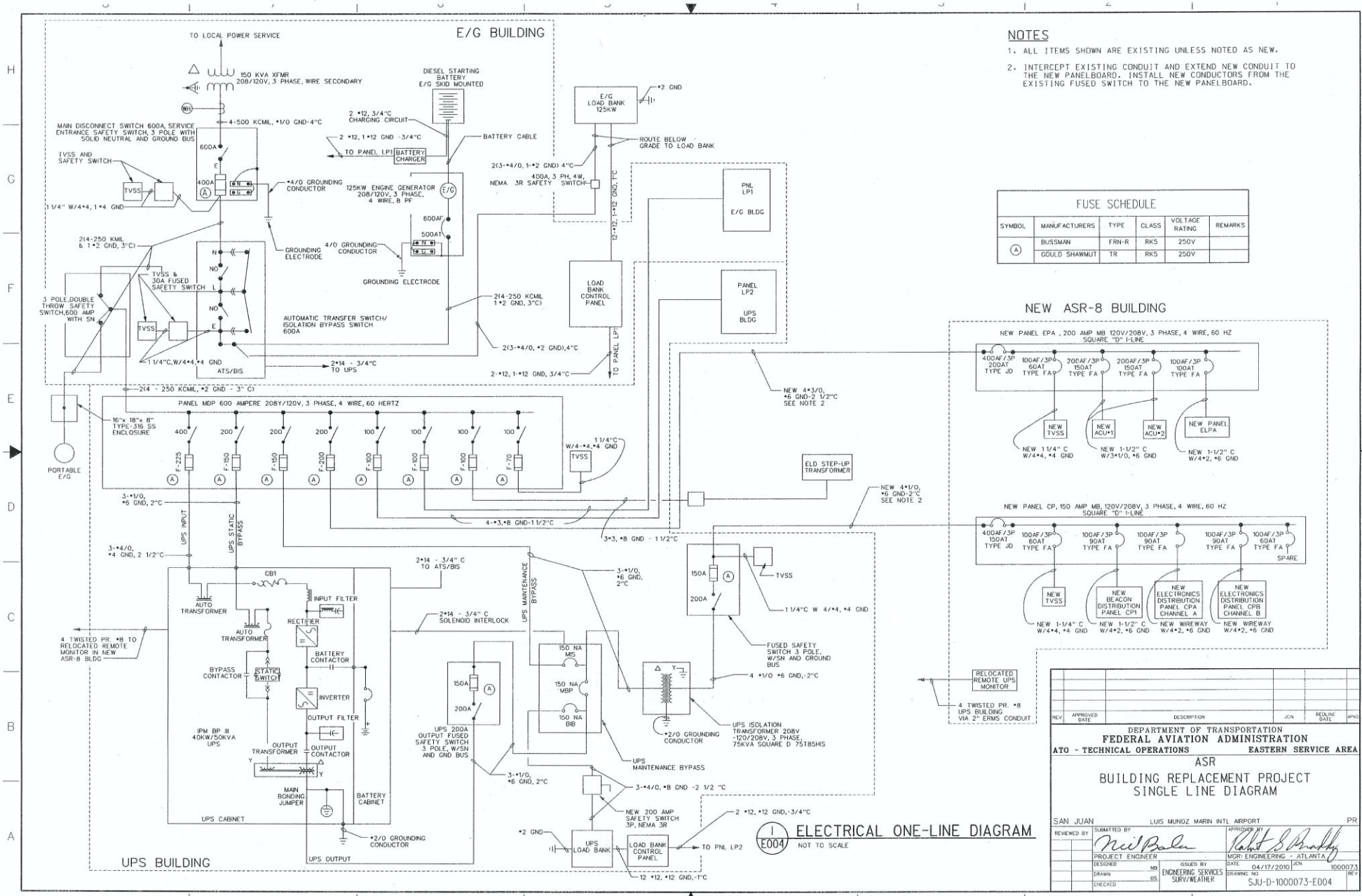

NOTES

1. ALL ITEMS SHOWN ARE EXISTING UNLESS NOTED AS NEW.
2. INTERCEPT EXISTING CONDUIT AND EXTEND NEW CONDUIT TO THE NEW PANELBOARD. INSTALL NEW CONDUCTORS FROM THE EXISTING FUSED SWITCH TO THE NEW PANELBOARD.

FUSE SCHEDULE

SYMBOL	MANUFACTURERS	TYPE	CLASS	VOLTAGE RATING	REMARKS
(A)	BUSSMAN	FRN-R	RK5	250V	
	GOULD SHAWMUT	TR	RK5	250V	

(1/E004) ELECTRICAL ONE-LINE DIAGRAM
NOT TO SCALE

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS — EASTERN SERVICE AREA

ASR
BUILDING REPLACEMENT PROJECT
SINGLE LINE DIAGRAM

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJECT ENGINEER	MGR: ENGINEERING - ATLANTA

DESIGNED MB
DRAWN GS
CHECKED

ISSUED BY: ENGINEERING SERVICES SURV/WEATHER

DATE 04/17/2010 JCN 1000073
DRAWING NO SJU-D-1000073-E004 REV

ISSUED FOR CONSTRUCTION 3/4/2010

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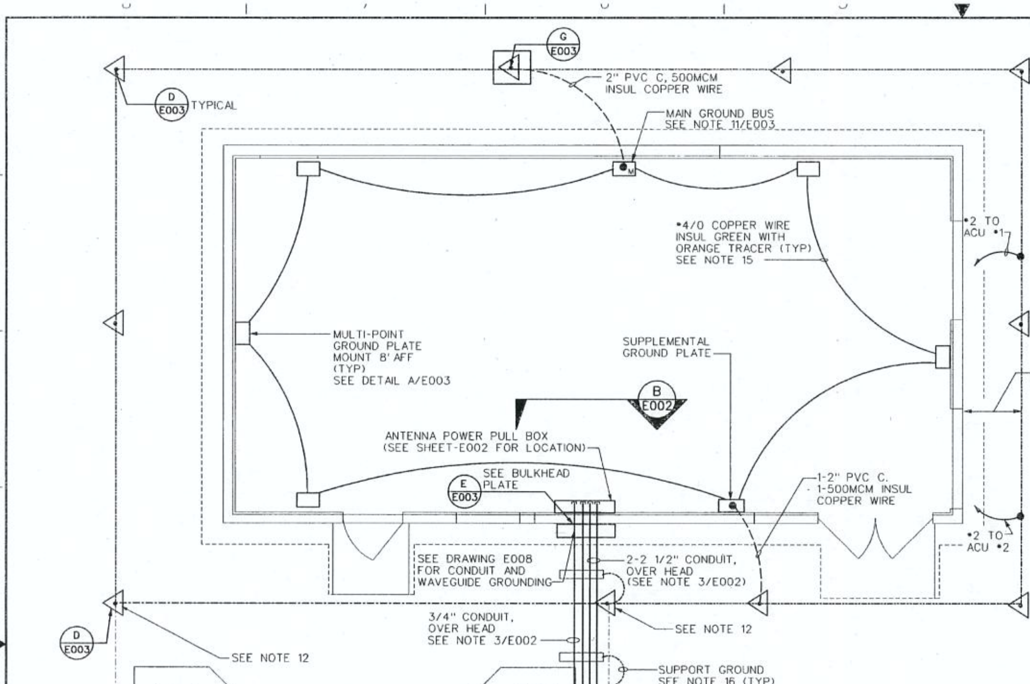
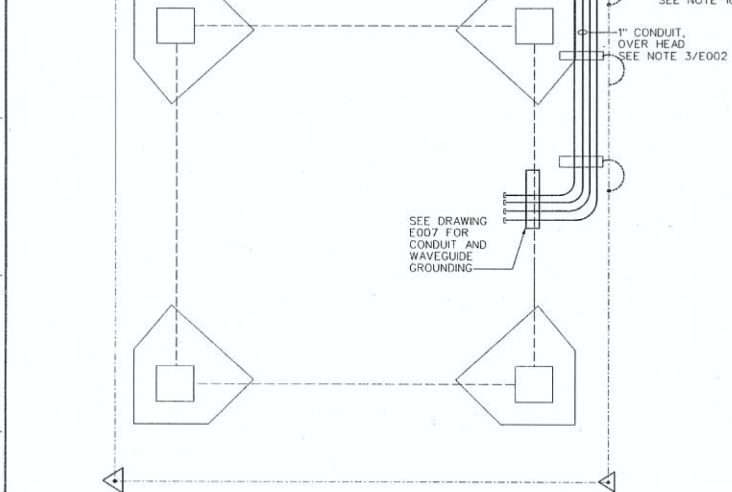
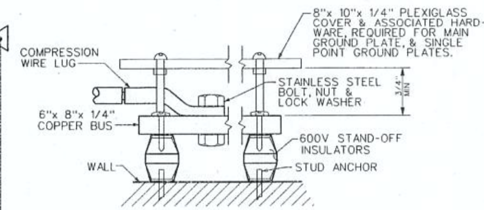
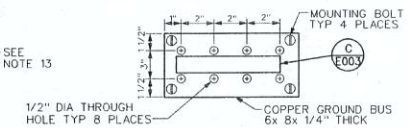




1 E003 GROUNDING PLAN
NOT TO SCALE



A E003 COPPER BUS PLATE & SUPPORT
NOT TO SCALE



B E003 PLAN COPPER GROUND BUS PLATE
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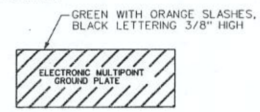
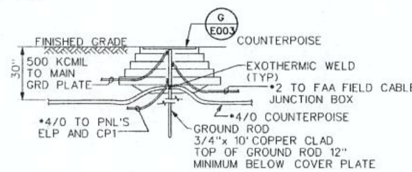
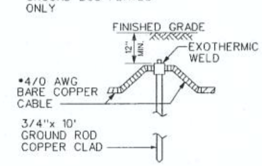


C E003 LABEL
NOT TO SCALE

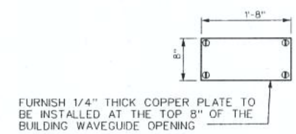
FOR MULTIPOINT GROUND BUS PLATES ONLY



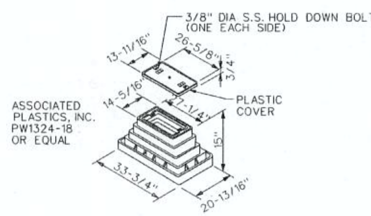
F E003 INSTALLATION DETAIL
NOT TO SCALE



D E003 INSTALLATION DETAIL
NOT TO SCALE



E E003 BULKHEAD PLATE
NOT TO SCALE



G E003 GROUND WELL & COVER
NOT TO SCALE

NOTES

1. ALL CONNECTIONS TO THE COUNTERPOISE SYSTEM SHALL BE MADE BY EXOTHERMIC WELDING, UNLESS OTHERWISE STATED.
2. ALL ITEMS SHOWN ARE NEW UNLESS OTHERWISE NOTED.
3. SEE DWG-E005 FOR ADDITIONAL NOTES AND LEGEND.
4. ROUTE ALL GROUNDS TO THE NEAREST POINT ON THE COUNTERPOISE SYSTEM.
5. COUNTERPOISE SHALL BE INSTALLED A DISTANCE OF 2' (MIN) TO 6' (MAX) AWAY FROM THE BUILDING OR TOWER FOUNDATIONS.
6. GROUNDING RODS SHALL BE SPACED APPROX. 20 FT APART.
7. THE #4/0, 7 STRANDS COPPER CONDUCTOR SHALL BE BURIED A MINIMUM OF TWO FEET IN THE GROUND.
8. EACH RIGID GALVANIZED STEEL CONDUIT ENTERING THE BUILDING SHALL BE GROUNDED WITH AN INSULATED GROUNDING BUSHING AND A BARE #6 CONDUCTOR AND SHALL BE BONDED TO THE COUNTERPOISE WHEN CROSSING OVER IT.
9. CONTRACTOR SHALL INSTALL GROMMETS AT ALL MULTIPOINT AND SINGLE POINT CONDUCTOR TRANSITIONS THROUGH WIREWAYS AND ELECTRICAL BOXES.
10. CONDUCT EARTH GROUND RESISTANCE TESTS IN THE PRESENCE OF THE RESIDENT ENGINEER AS SOON AS THE COUNTERPOISE IS COMPLETE WITH NO RAIN 72 HOURS PRIOR TO TEST. PLAN COPPER GROUND BUS PLATE.
11. LABEL PLEXIGLASS COVER ON MAIN GROUND BUS. "CAUTION MAIN GROUNDING PLATE" IN 3/8" BLACK LETTERS. CONNECT ALL BRANCH GROUNDING FROM MULTIPOINT PLATES AND MOUNT PER DETAIL A. (MOUNT MAIN GROUND BUS 8'-0" AFF).
12. CONNECT NEW COUNTERPOISE SYSTEM TO EXISTING CONTERPOISE.
13. CONTRACTOR SHALL EXTEND COUNTERPOISE TO ENCIRCLE THE PAD FOR ACU #1 AND ACU #2. SEE DWG M001.
14. NOT USED.
15. ALL MULTIPOINT CONDUCTORS (#4/0 COPPER WIRE) SHALL BE ROUTED BEHIND THE WIREWAY. "DO NOT INSTALL IN THE WIREWAY".
16. GROUND CONDUIT/WAVE GUIDE SUPPORT STRUCTURE TO COUNTERPOISE WITH #4/0 BARE COPPER GROUND WIRE.

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS **EASTERN SERVICE AREA**

ASR
BUILDING REPLACEMENT PROJECT
GROUNDING PLAN

SAN JUAN LUIS MUNOZ MARIN INTL AIRPORT PR

REVIEWED BY	SUBMITTED BY: [signature] PROJECT ENGINEER	APPROVED BY: [signature] MGR: ENGINEERING - ATLANTA
DESIGNED NB	ISSUED BY ENGINEERING SERVICES SURV/WEATHER	DATE 04/17/2010 JCN 1000073
DRAWN DS		DRAWING NO SJU-D-1000073-E003 REV
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ISSUED FOR CONSTRUCTION

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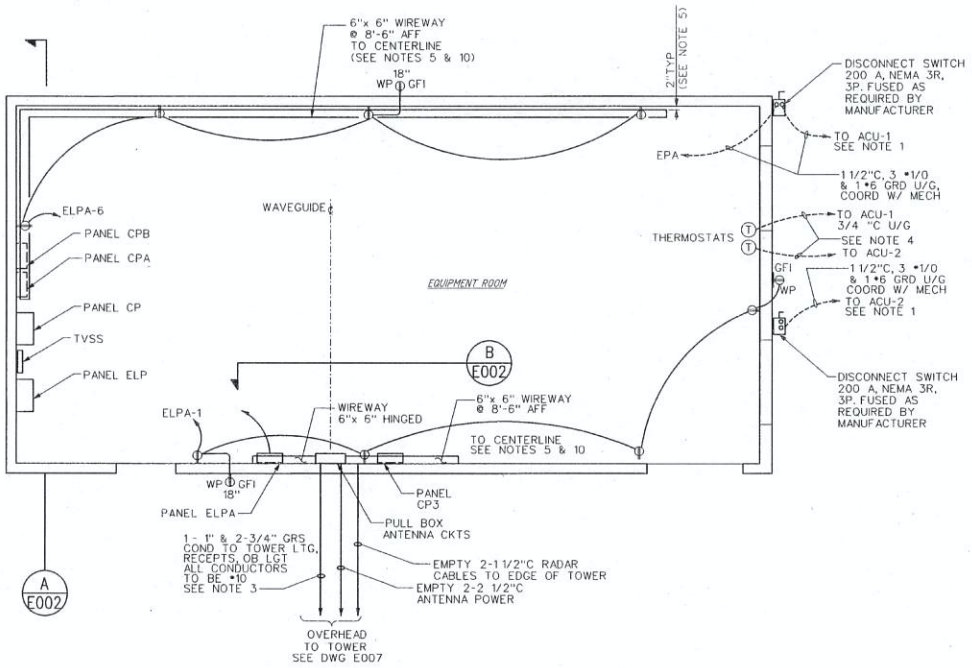


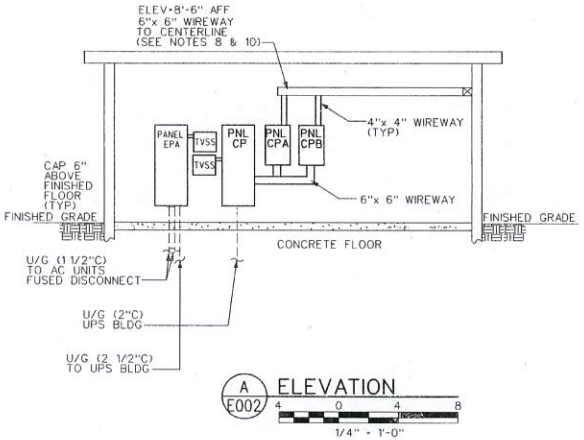
1 E002 **POWER PLAN**

4 0 4 8

1/4" = 1'-0"

NOTES

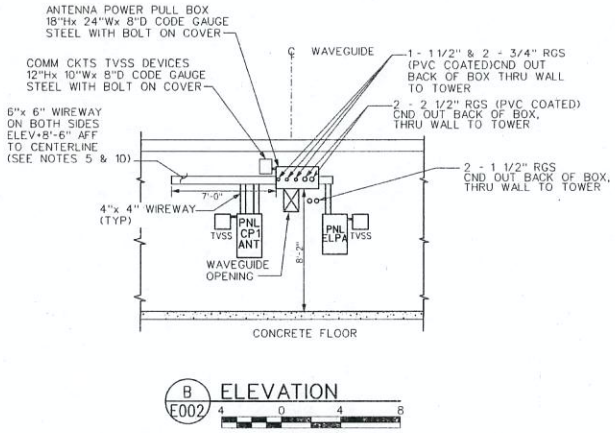
1. CONTRACTOR SHALL FURNISH AND INSTALL A THREE PHASE MONITOR TIMEMARK MODEL B265 IN THE AIR CONDITIONING UNIT AND MAKE CONNECTIONS TO POWER AND CONTROL CIRCUITS. MONITOR WILL PROTECT A/C UNIT IN THE EVENT OF PHASE LOSS.
2. SEE DWG - E003 FOR ADDITIONAL NOTES AND DWG - E005 FOR LEGEND.
3. CONTRACTOR SHALL FURNISH AND INSTALL (1 TO EACH ACU) 3/4"C U/G FROM HVAC CONTROL PANEL TO ACU-1 AND ACU-2, FOR CONTROL WIRING BY OTHERS.
4. CONTRACTOR SHALL FURNISH AND INSTALL A BLIND END PLATE FOR ALL WIREWAY END FITTINGS.
5. CONTRACTOR SHALL FURNISH AND INSTALL UNISTRUT STAND-OFF AS REQUIRED IN FIELD TO PROVIDE 2" CLEARANCE BETWEEN WALL AND WIREWAY AS SHOWN ON DRAWING.
6. ALL WIREWAY TRANSITIONS FROM DIFFERENT SIZE WIREWAYS TO ELECTRICAL BOXES AND FROM WIREWAYS TO ELECTRICAL EQUIPMENT SHALL BE LINED WITH AN INSULATING MATERIAL.
7. ALL GALVANIZED CONDUIT SURFACES, FIELD CUT OR DAMAGED BY FIELD CUTTINGS OR ANY OTHER MEANS, SHALL BE THOROUGHLY CLEANED AND TREATED WITH A LIQUID COLD GALVANIZING COMPOUND SUCH AS "S.R.C." BY SEALLUBE CO. AEROSOL COLD GALVANIZING SHALL NOT BE PERMITTED.
8. AFTER ALL EQUIPMENT GROUNDS ARE CONNECTED IN ALL THE ELECTRICAL EQUIPMENT CABINETS, COAT EACH GROUND CONNECTION POINT WITH A CLEAR SPRAY SEALER.
9. CONTRACTOR SHALL ROUTE ALL CIRCUITS FOR LIGHTING, RECEPTACLES, HEATING AND FANS IN CONDUIT DIRECTLY TO PANEL. DO NOT ROUTE CIRCUITS IN WIREWAY PROVIDED FOR ELECTRONICS CIRCUITS.
10. PROVIDE WIREWAY WITH METAL BARRIER TO SEPARATE WIREWAY INTO TWO SEPARATE SECTIONS. DO NOT USE WIREWAY FOR EQUIPMENT ROOM LIGHTING AND RECEPTACLE CIRCUITS.



A E002 **ELEVATION**

4 0 4 8

1/4" = 1'-0"



B E002 **ELEVATION**

4 0 4 8

1/4" = 1'-0"

REV	APPROVED DATE	DESCRIPTION	JCN	MED LINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS **EASTERN SERVICE AREA**

ASR

BUILDING REPLACEMENT PROJECT
ELECTRICAL POWER PLAN

SAN JUAN LUIS MUNOZ MARIN INTL AIRPORT PR

REVIEWED BY	SUBMITTED BY	APPROVED BY	
	PROJECT ENGINEER	MGR: ENGINEERING - ATLANTA	
	DESIGNED NB / DRAWN DS / CHECKED	ISSUED BY: ENGINEERING SERVICES SURV/WEATHER	DATE 04/17/2010 JCN 1000073
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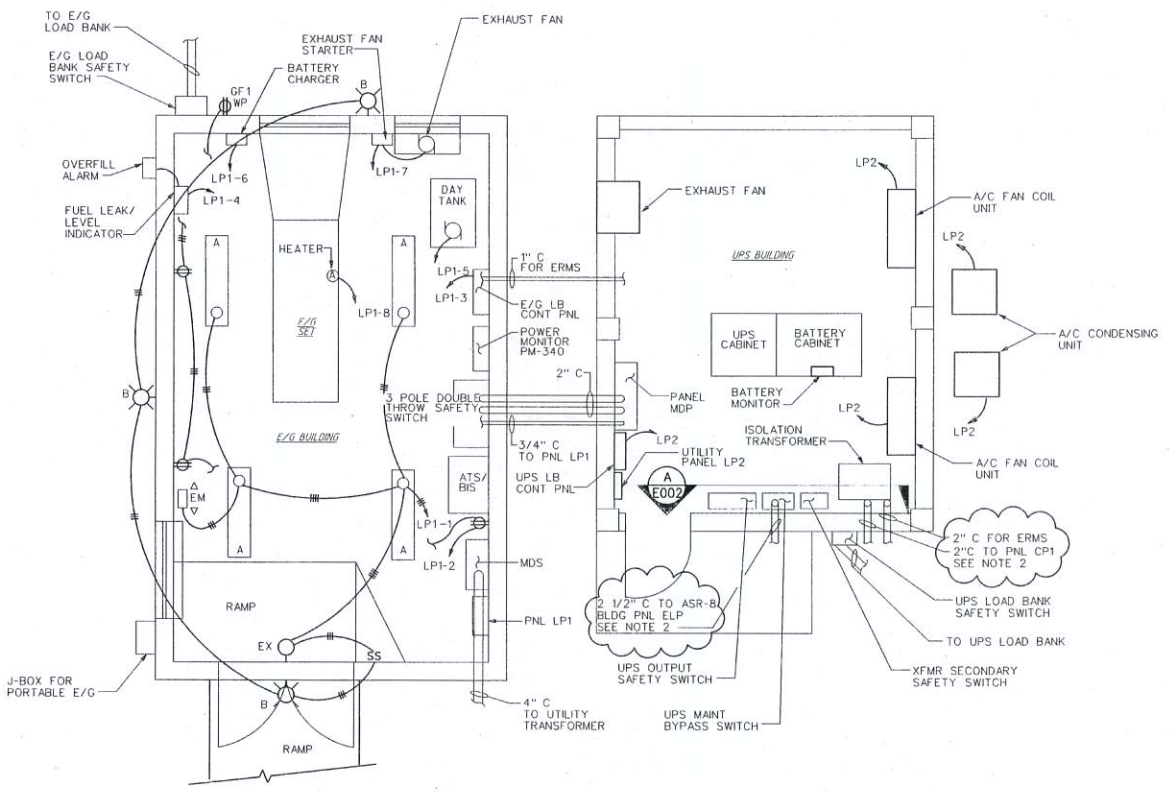

NOTES

1. ALL ITEMS SHOWN ARE EXISTING UNLESS NOTED AS NEW.
2. UTILIZE EXISTING CONDUIT AS NECESSARY FOR NEW FEEDERS TO THE NEW ASR-8 BUILDING.

LEGEND

- DUPLEX RECEPTACLE MOUNT 18" AFF
- WP GF1 — DUPLEX RECEPTACLE, WEATHER PROOF, GROUND FAULT PROTECTED. MOUNT 24" AFG
- A — SIMPLEX RECEPTACLE FOR E/G BLOCK HEATER MOUNT ON E/G FRAME
- A — FLUORESCENT LIGHT FIXTURE. 'A' INDICATES FIXTURE TYPE. SEE SCHEDULE DWG E002
- B — WALL MOUNTED HPS LIGHT FIXTURE. SEE SCHEDULE DWG E002
- EXIT — WALL MOUNTED EXIT SIGN
- EM — WALL MOUNTED EMERGENCY LIGHT SET. SEE SCHEDULE DWG E002
- LP1-1 — HOME RUN TO PANEL LP1, CIRCUIT 1
- CONDUIT RUN EXPOSED. HASH MARKS INDICATE NUMBER OF #12 CONDUCTORS INCLUDING GROUND
- MOTOR
- INDICATES NEW WORK

1 / E001 EXISTING E/G AND UPS BLDG ELECTRICAL PLAN

2 0 2 4 6

3/8" = 1'-0"

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DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
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ASR
BUILDING REPLACEMENT PROJECT
ELECTRICAL SITE PLAN

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

REVIEWED BY	SUBMITTED BY	APPROVED BY	
	PROJECT ENGINEER	MGR. ENGINEERING - ATLANTIC	
	DESIGNED NB	DATE 04/17/2010	JCN 1000073
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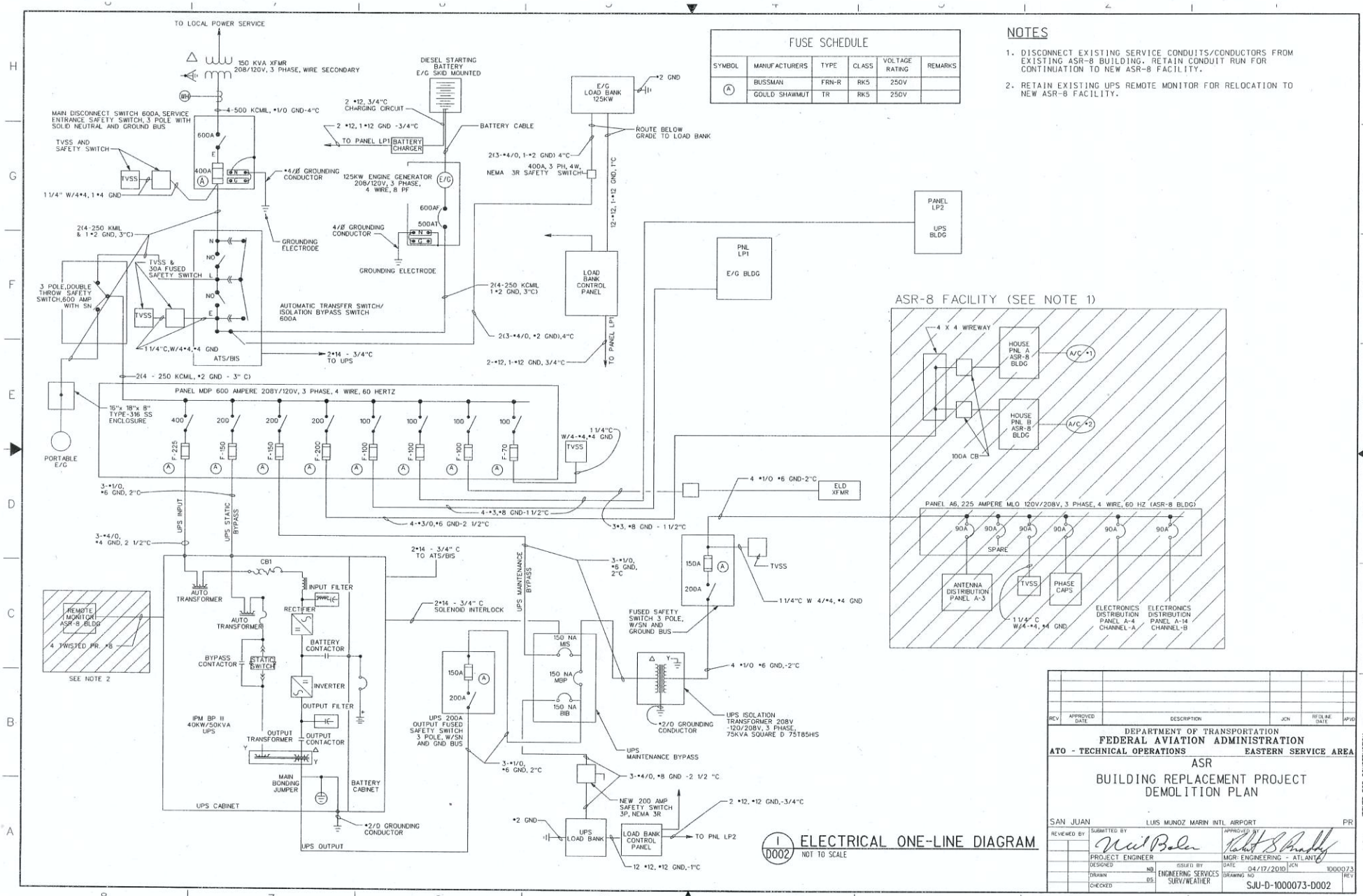

FUSE SCHEDULE

SYMBOL	MANUFACTURERS	TYPE	CLASS	VOLTAGE RATING	REMARKS
A	BUSSMAN	FRN-R	RK5	250V	
	GOULD SHAWMUT	TR	RK5	250V	

NOTES

1. DISCONNECT EXISTING SERVICE CONDUITS/CONDUCTORS FROM EXISTING ASR-8 BUILDING. RETAIN CONDUIT RUN FOR CONTINUATION TO NEW ASR-8 FACILITY.
2. RETAIN EXISTING UPS REMOTE MONITOR FOR RELOCATION TO NEW ASR-8 FACILITY.

I D002 ELECTRICAL ONE-LINE DIAGRAM
NOT TO SCALE

REV.	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
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ATO - TECHNICAL OPERATIONS EASTERN SERVICE AREA

ASR
BUILDING REPLACEMENT PROJECT
DEMOLITION PLAN

SAN JUAN LUIS MUNOZ MARIN INTL AIRPORT PR

REVIEWED BY	SUBMITTED BY	APPROVED
	Neil Bolen, PROJECT ENGINEER	Robert B. Bradley, MGR: ENGINEERING - ATLANTA

DESIGNED NB | DRAWN DS | CHECKED
ISSUED BY: ENGINEERING SERVICES SURV/WEATHER
DATE 04/17/2010 JCN 1000073
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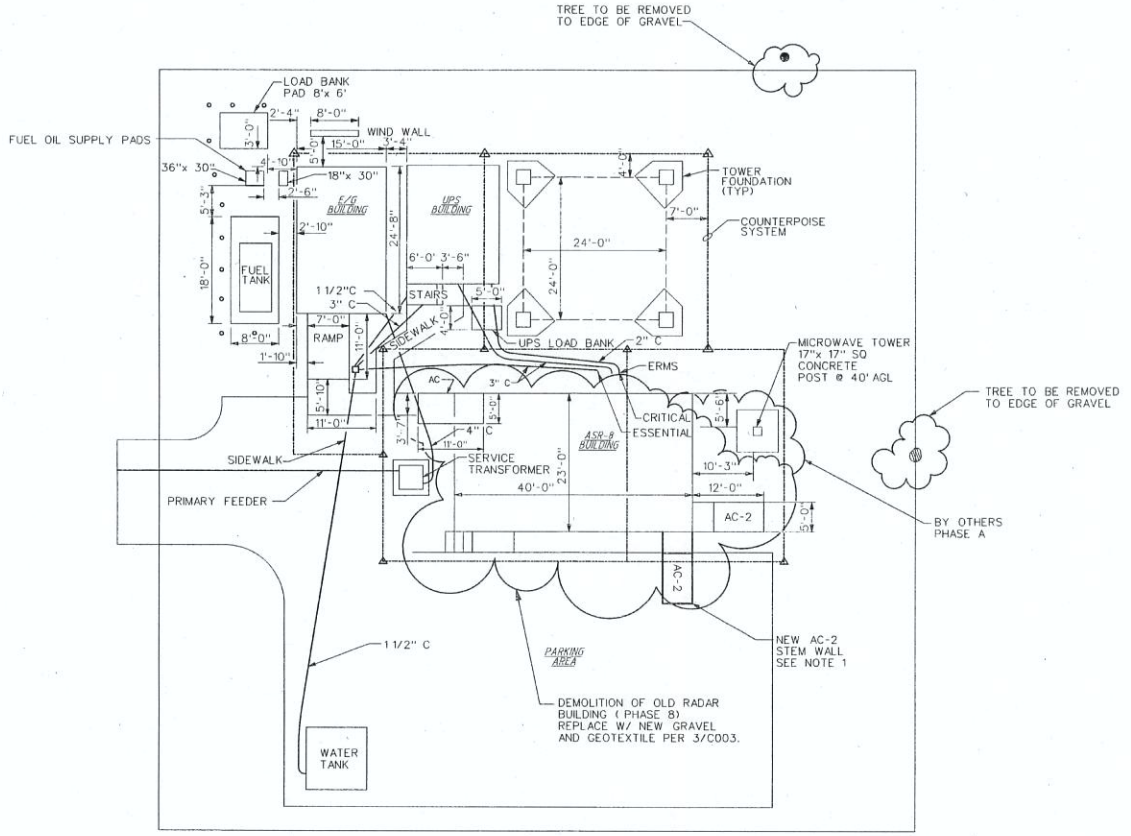

1 D001 SITE PLAN

10 0 10 20

1" = 10'-0"

NOTES

1. CONTRACTOR SHALL RELOCATE AC-2 WITH NEW WALL PENETRATIONS FOR DUCT WORK. PATCH OLD DUCT PENETRATIONS WITH METAL PLATES. UTILIZE EXISTING MATERIALS IF POSSIBLE FOR THIS TEMPORARY SERVICE.
2. THE ORIGINAL MICROWAVE CONCRETE POLE WAS PURCHASED AND INSTALLED BY POWER POLES, INC., OF RIO GRANDE, PUERTO RICO. THEIR WEBSITE IS WWW.POWERPOLESPR.COM.

CONSTRUCTION PHASES

THIS PROJECT SHALL BE COORDINATED AND PHASED TO ELIMINATE THE RISKS TO THE RADAR FACILITY AND AIR TRAFFIC CONTROL OPERATIONS.

1. MICROWAVE ANTENNAS ON EXISTING CONCRETE POLE REMOVED BY OTHERS (FROM OUT OF TOWN).
2. MOVE THE CONCRETE MICROWAVE POLE TO ITS FINAL LOCATION. MOVE AC-2 TO THE TEMPORARY LOCATION ON OLD BUILDING.
3. MICROWAVE ANTENNA RETURNED TO CONCRETE POLE BY OTHERS. (FROM OUT OF TOWN). CONTRACTOR SHALL BUILD TEMPORARY WAVE GUIDE SUPPORTS TO RADAR TOWER. WAVE GUIDE CABLE BY OTHERS.
4. BUILD THE NEW RADAR BUILDING TOTAL.
5. BUILD WAVE GUIDE SUPPORT STRUCTURES AND RADAR TOWER CONDUITS WITH LIGHTS. FACILITY INSPECTION INCLUDING E/G AND UPS SYSTEM INTEGRATION.
6. MILESTONE: BUILDING OCCUPANCY DATE
7. CUT HOLE INTO OLD RADAR BUILDING TO ACCESS EQUIPMENT RELOCATION. FAA RELOCATES OF RADAR ELECTRONICS EQUIPMENT.
8. DEMOLISH OLD BUILDING INCLUDING FOUNDATIONS. NEW GEOTEXTILE FABRIC AND GRAVEL ARE REQUIRED. AGGREGATE MATERIAL SHALL CONFORM TO ASTM C33 SIZE #57. NO FINES.
9. CLEAN UP PARKING LOT AND SITE. PROJECT COMPLETION.

LEGEND

△ GROUND ROD CONNECTION

——— GROUNDING COUNTERPOISE 4/0 BARE COPPER WIRE (STRANDED)

REV.	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS EASTERN SERVICE AREA

ASR

BUILDING REPLACEMENT PROJECT
SITE DEMOLITION PLAN

SAN JUAN LUIS MUNOZ MARIN INTL AIRPORT PR

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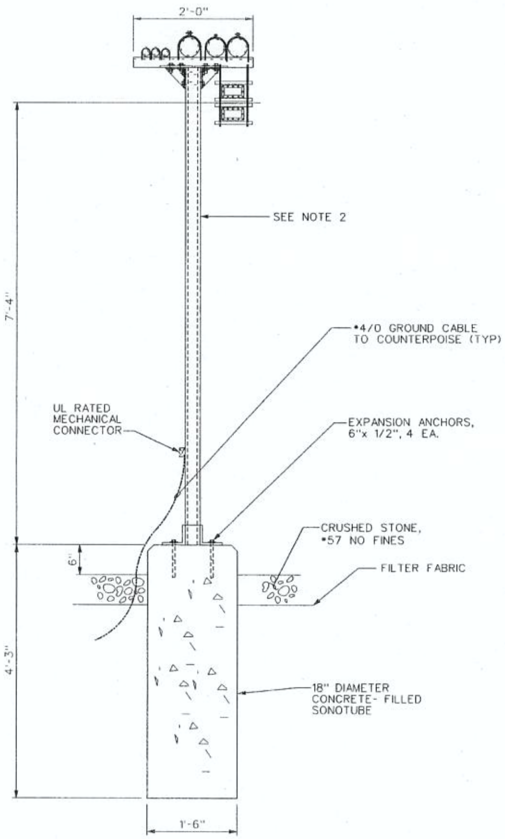
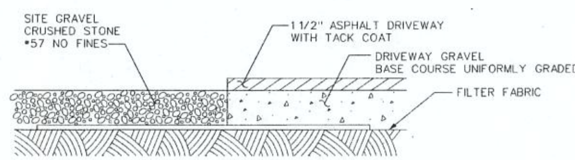


1 / C003 WAVEGUIDE SUPPORT

1' 0 1' 2'
SCALE: 1" = 1'-0"



3 / C003 SITE GRAVEL AND PARKING LOT AREAS

NOT TO SCALE

NOTES

1. UNDERGROUND UTILITY WARNING TAPE SHALL BE INSTALLED AT 6" BELOW GRADE IN THE POWER CABLE DUCTBANK TRENCH. THE WARNING TAPE SHALL BE PLASTIC -LAMINATED. ALUMINUM FOIL BACKED. 3" WIDE MEETING OR EXCEEDING AMERICAN PUBLIC WORKS ASSOCIATION (APWA) INDUSTRY STANDARDS INCLUDING COLOR CODE FOR FIBER OPTIC CABLES. THE WARNING TAPE SHALL HAVE "CAUTION BURIED ELECTRIC POWER LINE BELOW" PRINTED IN LARGE BLACK LETTERS.
2. WAVEGUIDE SUPPORTS COLUMNS SHALL BE 3"x 3"x 1/4" GALVANIZED ANGLE STEEL WITH WELDED FOOT.
3. WAVEGUIDE SUPPORT CROSS BAR TO BE EITHER: GALVANIZED ANGLE STEEL 3"x 3" x 1/4" WITH 1/2" BOLTS TO THE COLUMNS. A STAINLESS STEEL CHANNEL SHALL BE BOLTED TO THE ANGLE STEEL FOR THE CONDUIT STRAPS.
4. CONDUIT CHANNEL BE STAINLESS STEEL - NO SUBSTITUTE.
5. ALL HARDWARE WILL BE STAINLESS STEEL EXCEPT THAT USED WITH GALVANIZED ANGLE(IF APPLICABLE).
6. CONTRACTOR SHALL INSTALL THREE WAVE GUIDE SUPPORTS AT LOCATIONS FIELD SHOWN.

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
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BUILDING REPLACEMENT PROJECT
WAVEGUIDE SECTIONS AND DUCTBANK DETAILS

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

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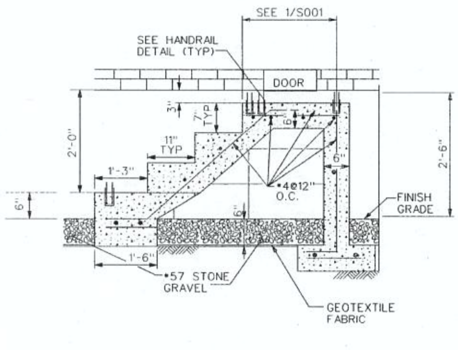

1 C002 SECTION
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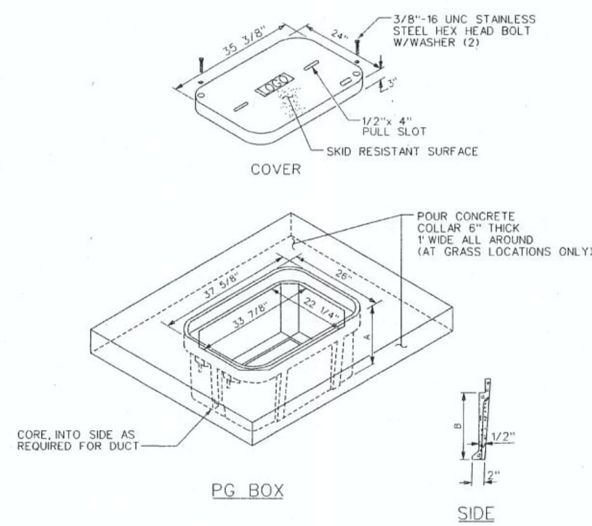
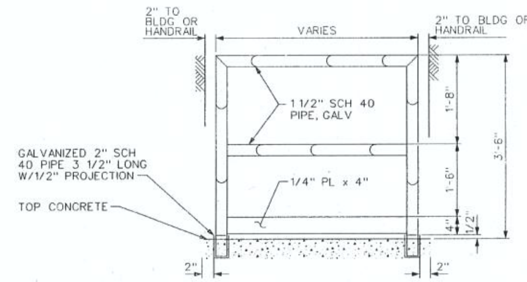
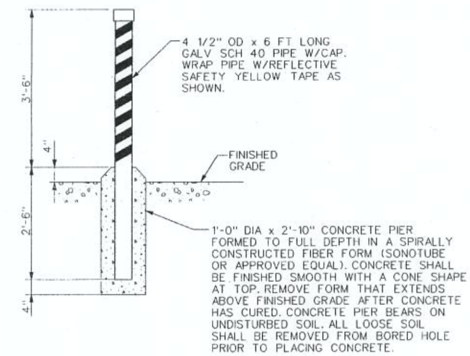


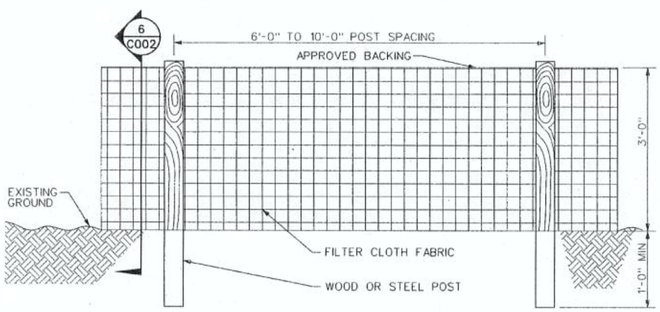
2 C002 HANDHOLE
NOT TO SCALE



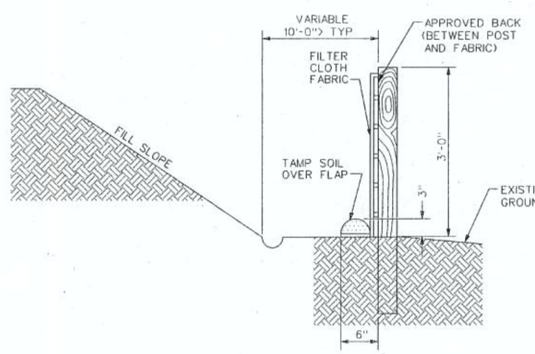
3 C002 HANDRAILS (REMOVABLE)
NOT TO SCALE



4 C002 GUARD POST
NOT TO SCALE



5 C002 TYPICAL SILT FENCE SECTION
NOT TO SCALE



6 C002 SILT FENCE ELEVATION
NOT TO SCALE

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DEPARTMENT OF TRANSPORTATION
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BUILDING REPLACEMENT PROJECT
SITE DETAILS AND SECTIONS

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

REVIEWED BY — SUBMITTED BY: PROJECT ENGINEER — APPROVED BY: MGR: ENGINEERING - ATLANTA
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ISSUED BY: ENGINEERING SERVICES SURV/WEATHER
DATE 04/17/2010 — JCN 1000073
DRAWING NO SJU-D-1000073-C002 — REV

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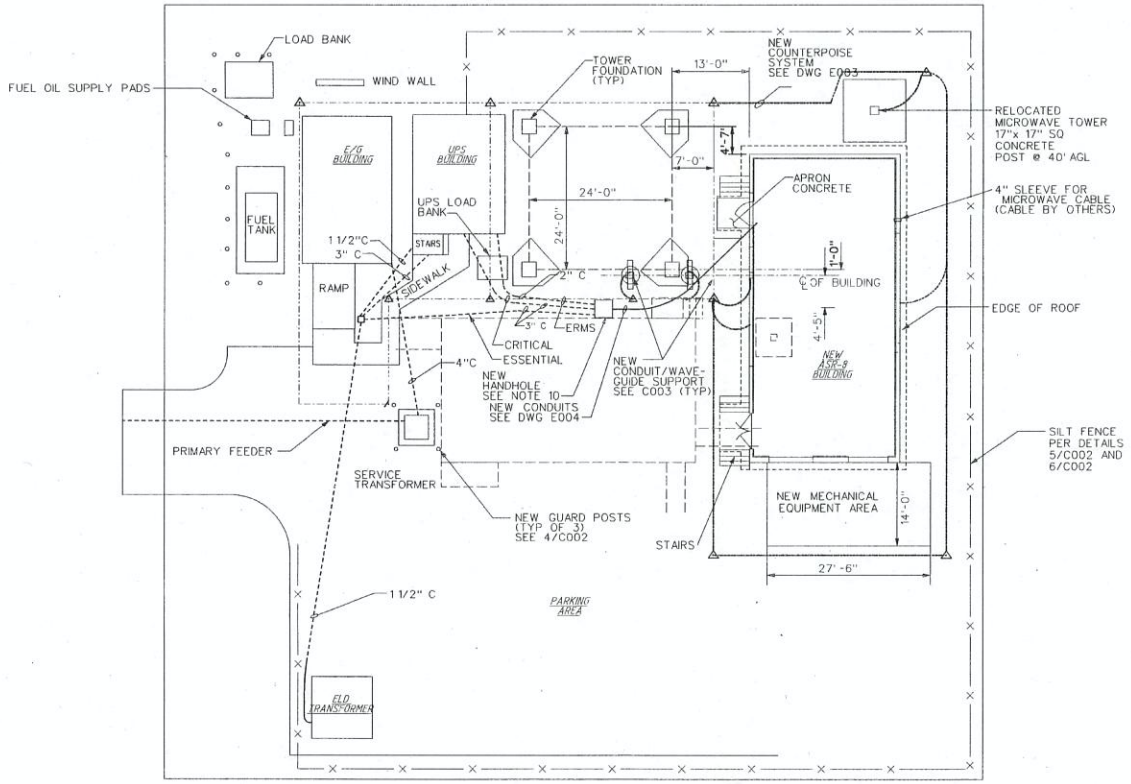

1 C001 SITE PLAN

10' 0 10' 20'

SCALE: 1" = 10'

GENERAL NOTES

1. ALL ITEMS SHOWN ARE EXISTING UNLESS NOTED AS NEW.
2. CONCRETE SHALL HAVE A MINIMUM 7 DAYS CYLINDER COMPRESSIVE STRENGTH OF 3000 PSI.
3. ALL REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL BARS TO ASTM A615 GRADE 60.
4. WELDED WIRE FABRIC SHALL CONFORM TO SPECIFICATIONS FOR WELDED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT (ASTM A185).
5. MINIMUM CONCRETE PROTECTION, SPLICES AND HOOKS FOR REINFORCING STEEL SHALL CONFORM TO ACI-318.
6. EXPOSED CONCRETE SLABS SHALL HAVE 3/4" CHAMFERED EDGES.
7. ALL CONCRETE WORK SHALL COMPLY TO ACI-318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND CONCRETE REINFORCING STEEL (CRSI), MANUAL OF STANDARD PRACTICE.
8. CONCRETE MATERIALS SHALL CONFORM TO ASTM C 150, TYPE 1.
9. AGGREGATE MATERIALS SHALL CONFORM TO ASTM C33, SIZE 57.
10. INTERCEPT EXISTING CONDUITS WITH NEW HANDHOLE. INSTALL NEW CONDUITS FROM HANDHOLE TO NEW ASR-8 BUILDING. SEE DRAWING E004.

REV.	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
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ASR
BUILDING REPLACEMENT PROJECT
SITE PLAN

SAN JUAN LUIS MUNOZ MARIN INTL AIRPORT PR

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DESIGNED NB	ISSUED BY	DATE 04/17/2010 JCN 1000073
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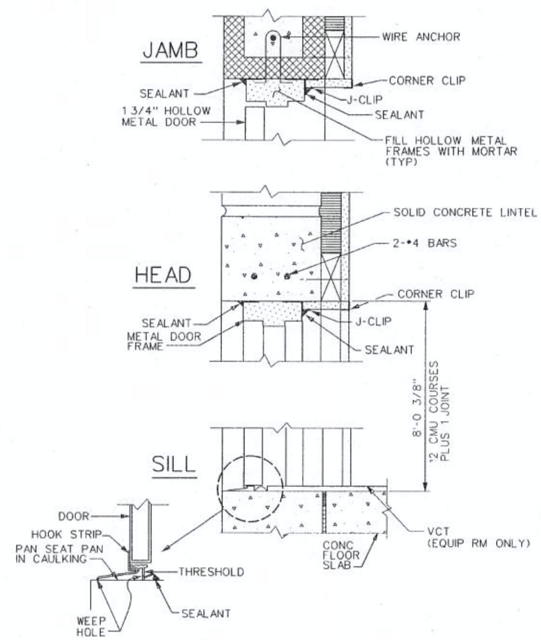

A / A004 SECTION THROUGH DOOR

NOT TO SCALE

DOOR AND BUILDER'S HARDWARE

DOOR:	FLUSH ALUMINUM DOOR, 5 PLY COMPOSITE LAMINATED CONSTRUCTION
FRAME:	ALUMINUM DOOR FRAME, OPEN BACK, 1.75" BY 5" EXTRUDED CHANNEL (6063-T5) ALUMINUM ALLOY.
THRESHOLD:	EXTRUDED ALUMINUM, ZERO
LOCKSET:	TYPE 86A-2 (FED SPEC FF-H-106) US26D FINISH (GFM)
STOP HOLDER:	OVERHEAD TYPE EQUAL TO GLYNN-JOHNSON GJ-70 SERIES (GFM)
HINGES:	1 1/2" PR 4 1/2"x 4 1/2" BALL BEARING, FULL MORTISE, TEMPLATE, NON-REMOVABLE PINS, EXTRA HEAVY WEIGHT, WROUGHT BRONZE (PER DOOR)
WEATHER-STRIPPING:	HEAD AND JAMBS: ZERO SERIES 18L OR EQUAL. SILL: SPRING BRONZE. ZERO #22 OR EQUAL (EXTERIOR DOORS)

FINISH HARDWARE: US26D OR AS NOTED
CYLINDER: BEST 1E74 WITH CONSTRUCTION CORE (GFM)

FINISH SCHEDULE

EXTERIOR:
DOOR AND FRAME: TEXTURED COATING

INTERIOR:
DOOR AND FRAME: SAME AS EXTERIOR

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS **EASTERN SERVICE AREA**

ASR
BUILDING REPLACEMENT PROJECT
SECTIONS AND DETAILS
2 OF 2

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

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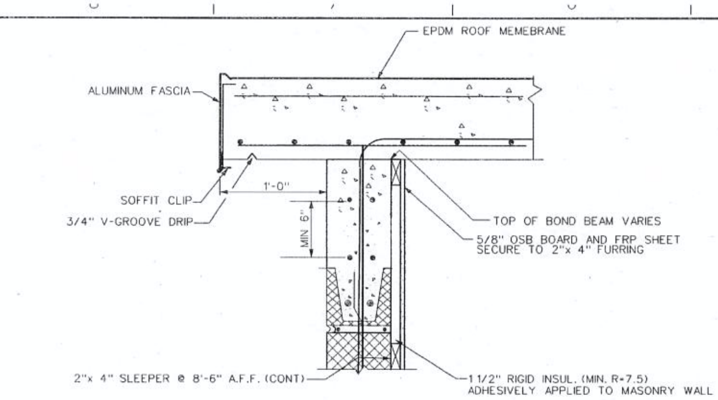
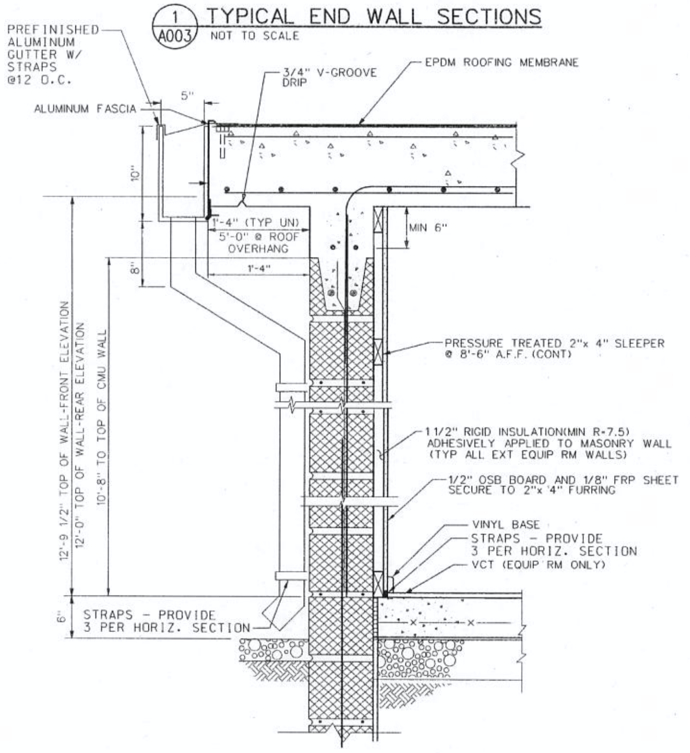
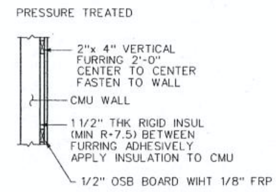


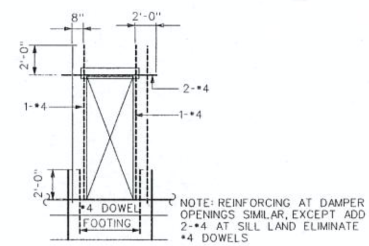
1 A003 TYPICAL END WALL SECTIONS
NOT TO SCALE



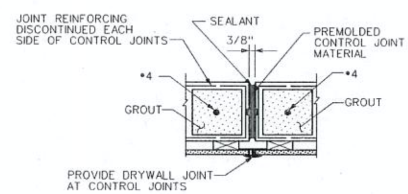
2 A003 TYPICAL LONGITUDINAL WALL SECTION
NOT TO SCALE



4 A003 INSULATED & OSB BOARD LINED EXTERIOR WALL DETAIL
NOT TO SCALE



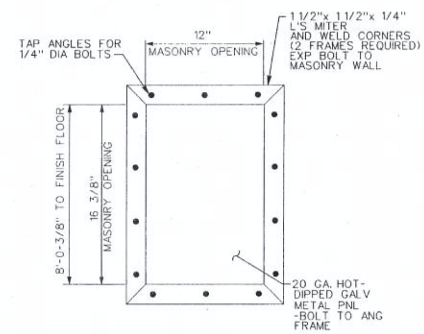
7 A003 REINFORCING AT WALL OPENING
NOT TO SCALE



5 A003 PLAN AT CONTROL JOINT
NOT TO SCALE

NOTES

1. FASCIA SHALL BE EITHER EXTRUDED ALUMINUM 6063-T52 OR FORMED ALUMINUM WITH A MINIMUM THICKNESS OF 0.125 INCHES, BUT MUST BE COMPATIBLE WITH ROOF SYSTEM WARRANTY.
2. NOT USED.
3. GUTTERS AND DOWNSPOUTS SHALL BE FORMED ALUMINUM WITH A MINIMUM THICKNESS OF 0.080 INCHES.
4. ALL METAL EXPOSED TO VIEW SURFACES SHALL BE PREFINISHED WITH A KYNAR 500, FLUOROPOLYMER COATING, COLORED MEDIUM BRONZE.
5. FASTENERS SHALL BE AS RECOMMENDED BY THE FABRICATOR/ MANUFACTURER. EXPOSED FASTENERS SHALL BE PAINTED TO MATCH, AFTER ERECTION, WITH AIR CURED FLUOROPOLYMER SUCH AS PPG'S DURANAR ADS.
6. OSB BOARDS TO BE COVERED WITH FIBERGLASS REINFORCED PANELS (FRP) AND TRIMMED PER MANUFACTURER'S RECOMMEND-ATIONS. COLOR TO BE TEXTURED "BRIGHT WHITE", THICKNESS =0.090", HEIGHT = 10', WIDTH = 4'.CONTRACTOR TO APPLY ADHESIVE SPECIFICALLY FOR FRP TO 100% OF PANEL, NOT WALL, USING NOTCHED TROWEL.



6 A003 WAVEGUIDE OPENING AND FRAME (2 REQ'D)
NOT TO SCALE

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS — EASTERN SERVICE AREA

ASR
BUILDING REPLACEMENT PROJECT
SECTIONS AND DETAILS
1 OF 2

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

REVIEWED BY	SUBMITTED BY: [signature] PROJECT ENGINEER		APPROVED BY: [signature] MGR: ENGINEERING - ATLANTIC
DESIGNED NB	ISSUED BY ENGINEERING SERVICES SURV/WEATHER	DATE 04/17/2010	JCN 1000073
DRAWN DS		DRAWING NO SJU-D-1000073-A003	REV
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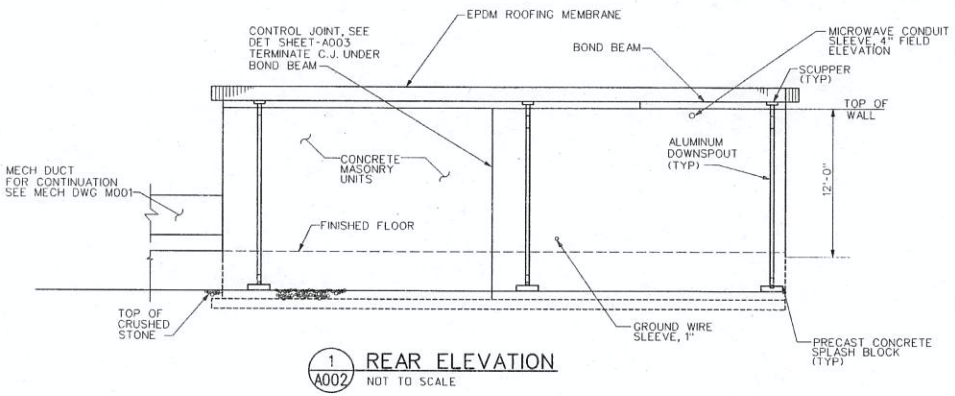
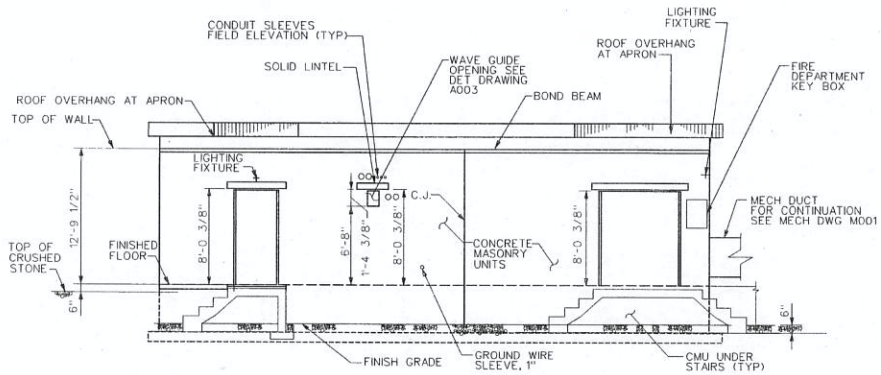
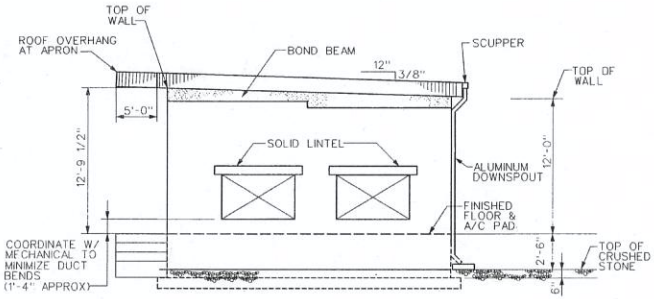


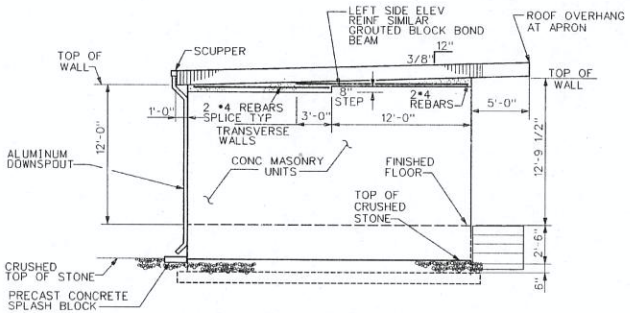
1 A002 REAR ELEVATION
NOT TO SCALE



3 A002 FRONT ELEVATION
NOT TO SCALE



4 A002 LEFT SIDE ELEVATION
NOT TO SCALE



2 A002 RIGHT SIDE ELEVATION
NOT TO SCALE

NOTE

1. EPDM ROOFING MEMBRANE SHALL BE WHITE, 60 MIL THICKNESS, ENERGY STAR RATED, UL CLASS-A FIRE RATED. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS. THIS ROOFING MEMBRANE SHALL BE ADHERED TO 100% OF THE CONCRETE DECKING.

REV.	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS EASTERN SERVICE AREA

ASR

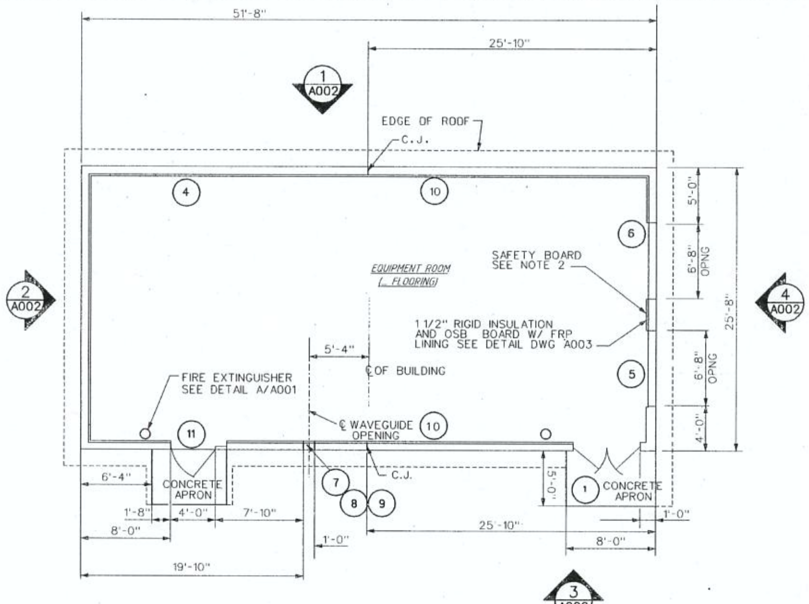
BUILDING REPLACEMENT PROJECT
BUILDING ELEVATIONS

SAN JUAN LUIS MUNOZ MARIN INTL AIRPORT PR

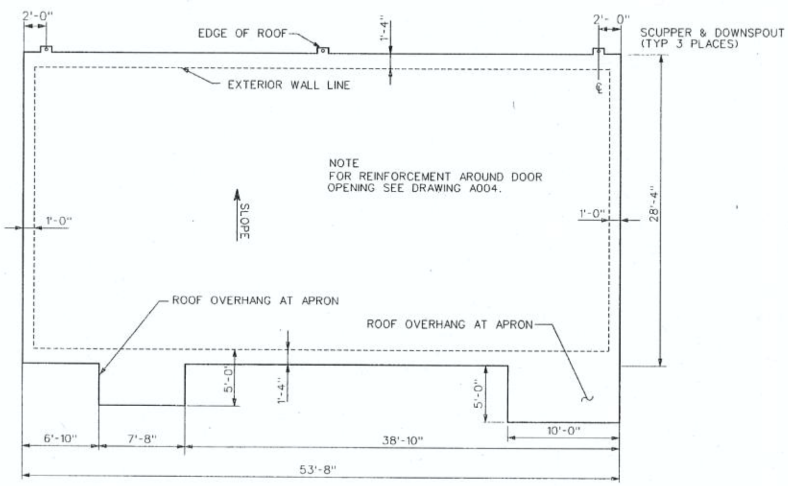
REVIEWED BY	SUBMITTED BY: Neil Baker, PROJECT ENGINEER	APPROVED BY: Robert S. Bradley, MGR. ENGINEERING - ATLANTA
	DESIGNED: NB	ISSUED BY: ENGINEERING SERVICES SURV/WEATHER
	DRAWN: DS	DATE: 04/17/2010 JCN: 1000073
	CHECKED	DRAWING NO: SJU-D-1000073-A002 REV:

ISSUED FOR CONSTRUCTION

DGN: SJU D 1000073 A002.dgn



1 FLOOR PLAN
A001 SCALE: 3/16"=1'-0"



2 ROOF PLAN
A001 SCALE: 3/16"=1'-0"

WALL OPENING AND DOOR SCHEDULE

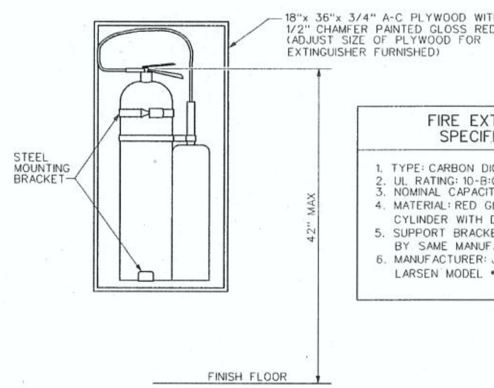
ITEM	MASONRY OPENING WIDTH x HEIGHT	DESCRIPTION
1	3'-4"x 8'-0 3/8"	DOOR 3'-0"x 7'-10"x 1 3/4"
4	4" DIA	CABLE SLEEVE MICROWAVE
5	6'-8"x 4'-0"	SUPPLY/RETURN DUCT
6	6'-8"x 4'-0"	SUPPLY/RETURN DUCT
7	1'-0"x 1'-4 3/8"	WAVE GUIDE OPENING
8	2x 2 1/2" DIA	TOWER CONDUITS
9	3x 1" DIA	TOWER CONDUITS
10	2" DIA	GROUNDING CONDUIT
11	6'-4"x 8'-0 3/8"	DOOR 6'-0"x 7'-10"x 1 3/4"

NOTES

1. PLYWOOD MOUNTING PANELS SHALL BE ANCHORED SECURELY INTO FRP/OSB BOARD.
2. SAFETY BOARD SHALL BE 3/4" PLYWOOD 4' BY 4', PAINTED GREEN WITH WHITE TRIM. RESIDENT ENGINEER TO SUPPLY AND MOUNT SAFETY ITEMS.

LEGEND

CMU - CONCRETE MASONRY UNIT
C.J. - CONTROL JOINT
AFF - ABOVE FINISHED FLOOR
GRS - GALVANIZED RIGID STEEL
CND.C - CONDUIT



FIRE EXTINGUISHER SPECIFICATIONS

1. TYPE: CARBON DIOXIDE
2. UL RATING: 10-B:C
3. NOMINAL CAPACITY: 15 POUNDS
4. MATERIAL: RED GLOSSY POLYESTER COATED ALUMINUM CYLINDER WITH DISCHARGE HORN
5. SUPPORT BRACKET: RED ENAMEL STEEL WLL BRACKET BY SAME MANUFACTURER AS EXTINGUISHER
6. MANUFACTURER: J.L. INDUSTRIES "SENTINEL #15" LARSEN MODEL #CD15

A FIRE EXTINGUISHER DETAIL
A001 NOT TO SCALE

SCALE: 3/16" = 1'-0"

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS — EASTERN SERVICE AREA

ASR
BUILDING REPLACEMENT PROJECT
BUILDING PLAN AND WALL OPENINGS

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

SUBMITTED BY: PROJECT ENGINEER
APPROVED BY: MGR ENGINEERING - ATLANTA
DESIGNED / DRAWN NB / CHECKED DS
ISSUED BY: ENGINEERING SERVICES SURV/WEATHER
DATE: 04/17/2010 JCN: 1000073
DRAWING NO: SJU-D-1000073-A001

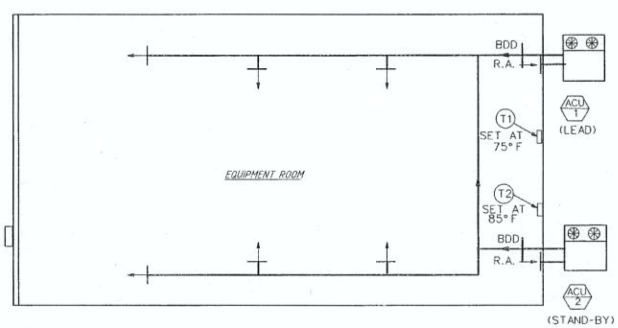
ISSUED FOR: CONSTRUCTION

AIR CONDITIONING UNIT SCHEDULE

EQUIPMENT NUMBER	MANUFACTURER	MODEL AND TYPE	LOCATION	DISCHARGE	CAPACITY (BTUH) SENSIBLE	CAPACITY (BTUH) TOTAL	INDOOR FAN TYPE	INDOOR FAN CFM	INDOOR FAN EXT.S.P. (IN H O2)	OUTDOOR AIR CFM	MOTOR DATA DRIVE	MOTOR DATA MOTOR RPM	MOTOR DATA B.H.P.	FILTER DATA TYPE	FILTER DATA NUMBER	FILTER DATA SIZE	ELECTRICAL DATA NOMINAL INPUT	COMPRESSORS QTY	COMPRESSORS RLA	COMPRESSORS LRA	OUTDOOR FAN QTY	OUTDOOR FAN H.P.	INDOOR FAN H.P.	INDOOR FAN FLA	HEATERS	CONTROLS UNIT	CONTROLS HEAD PRESSURE	CONTROLS COMPRESSOR
ACU-1 ACU-2	TRANE *	TCH241E3 SINGLE PACKAGE PACKAGE COOLING ONLY	SLAB MOUNTED	HORIZONTAL (SIDE SUPPLY & RETURN)	169,000	240,000	CENTRIFUGAL CLASS I	8,000	0.85	SEE NOTE 5	BELT	3450	5.0	DISPOSABLE FIBERGLASS FOR RETURN AIR ONLY	12	SEE NOTE 6 20"x 20" x 2"	208V/30/60Hz	2	41.4 EA.	247 EA.	2	1 EA.	7.5	24.2	NONE	COMPLETE PACKAGE	FOR LOW AMBIENT OPERATION DOWN TO 0°F	5-YEAR COMPRESSOR WARRANTY

NOTES:
1. CAPACITY BASED ON 95°F F.D.B. ENTERING CONDENSER 80°F E.D.B. -67°F E.W.B. ENTERING EVAPORATOR
2. PROVIDED EACH UNIT WITH ANTI-SHORT CYCLE TIMERS FOR EACH COMPRESSOR, TIME DELAY RELAYS, COMPRESSOR UNLOADERS, AND CONDENSER COIL GUARDS.
3. ALL TIME DELAY RELAYS SHALL BE ADJUSTABLE TYPE (0 TO 5 MINUTES).
4. PROVIDE WITH FACTORY APPLIED DIPPED PHENOLIC COATING TO ALL COILS AND ADSIL COATING TO ALL COMPONENTS OF THE UNIT INCLUDING THE INTERIOR AND EXTERIOR OF THE CABINET.
5. DO NOT INSTALL OUTSIDE AIR INTAKE HOODS.
6. PROVIDED 2" THICK PLEATED FILTERS. SEE SPECIFICATIONS FOR EFFICIENCY. FILTERS SHALL BE 20" x 20" x 2" MAXIMUM WITH SIZE, QUANTITY, AND LOCATION AS RECOMMENDED BY MANUFACTURER TO FILTER ALL (100%) RETURN AIR.
7. PROVIDED SPARE MICROPROCESSOR CONTROL CIRCUIT BOARD FOR EACH (2 TOTAL) AIR CONDITIONING UNIT. SPARE CIRCUIT BOARDS SHALL BE IDENTICAL TO AND FULLY COMPATIBLE WITH CIRCUIT BOARDS FACTORY INSTALLED IN AIR CONDITIONING UNITS.

UNITS SHALL BE WIRED AT FACTORY SO THAT WHEN THERMOSTAT SET POINT IS SATISFIED, ALL COMPRESSORS SHALL IMMEDIATELY DE-ENERGIZE.



1 M002 SCHEMATIC FLOW DIAGRAM

NOT TO SCALE

NOTE: INSTALL THERMOSTAT GUARDS, HONEYWELL TG500A, OR APPROVED EQUAL, FOR THEMOSTATS T1 - T5. PROVIDE ENGRAVED IDENTIFICATION PLATES FOR T1 - T5, ACU-1, AND ACU-2.

SEQUENCE OF OPERATION

C. HVAC SYSTEM:

1. UNDER NORMAL (FULL INTERNAL LOAD) OPERATING CONDITIONS, ONE AIR CONDITIONING UNIT (ACU) IS OPERATING WITH THE SECOND UNIT ON STANDBY. STANDBY UNIT IS ACTIVATED WHEN INDOOR TEMPERATURE RISES TO 85°F. DURING NORMAL INTERNAL LOAD CONDITIONS, COMPRESSORS SHALL CYCLE AS REQUIRED, CONTROLLED BY COOLING THERMOSTAT.
2. THE HVAC FLOW AND CONTROL DIAGRAMS ON THIS DRAWING INDICATE ACU-1 AS THE LEAD UNIT, AND ACU-2 AS THE STANDBY UNIT. THE TWO UNITS SHALL BE IDENTICAL SO THAT THE LEAD AND STANDBY FUNCTIONS ARE INTERCHANGEABLE AND MAY BE ALTERNATED BY MANUALLY READJUSTING THERMOSTATS T-1 & T-2.
3. LEAD ACU THERMOSTAT (T-1) SHALL HAVE THE FOLLOWING SETTINGS:
   FAN SWITCH SET AT "ON" POSITION.
   CONTROL TEMPERATURE SET AT 75°F.
   ADJUSTABLE TIME DELAYS FOR COMPRESSORS (ADJUSTABLE 0 TO 5 MINUTES):
   1ST STAGE - 1 MINUTE
   2ND STAGE - 3 MINUTES
4. STANDBY ACU THERMOSTAT (T-2) SHALL HAVE THE FOLLOWING SETTINGS:
   FAN SWITCH SET AT "AUTO" POSITION.
   CONTROL TEMPERATURE SET AT 85°F.
   ADJUSTABLE TIME DELAYS FOR COMPRESSORS (ADJUSTABLE 0 TO 5 MINUTES):
   1ST STAGE - 1 MINUTE
   2ND STAGE - 3 MINUTES
5. THERMOSTAT SETTINGS FOR ALL THERMOSTATS SHALL BE PLACED ON A PLASTIC LAMINATED PLATE AND MOUNTED ON WALL ADJACENT TO THERMOSTATS.

LEGEND

ACU - AIR CONDITIONING UNIT
R1 - CONTROL RELAY
R2,R3 - TIME DELAY RELAY
DM - DAMPER MOTOR
DS - DISCONNECT SWITCH INTERLOCK
MEF - EXHAUST FAN MOTOR STARTER
OLS - OVERLOADS
T - THERMOSTAT
BDD - BACK DRAFT DAMPER

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS **EASTERN SERVICE AREA**

ASR
BUILDING REPLACEMENT PROJECT
MECHANICAL SCHEDULES AND
SCHEMATIC FLOW DIAGRAM

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

REVIEWED BY / SUBMITTED BY: PROJECT ENGINEER / APPROVED BY: MGR. ENGINEERING - ATLANTA
DESIGNED / DRAWN: NB / DS / CHECKED
ISSUED BY: ENGINEERING SERVICES SURV/WEATHER
DATE: 04/17/2010 JCN: 1000073
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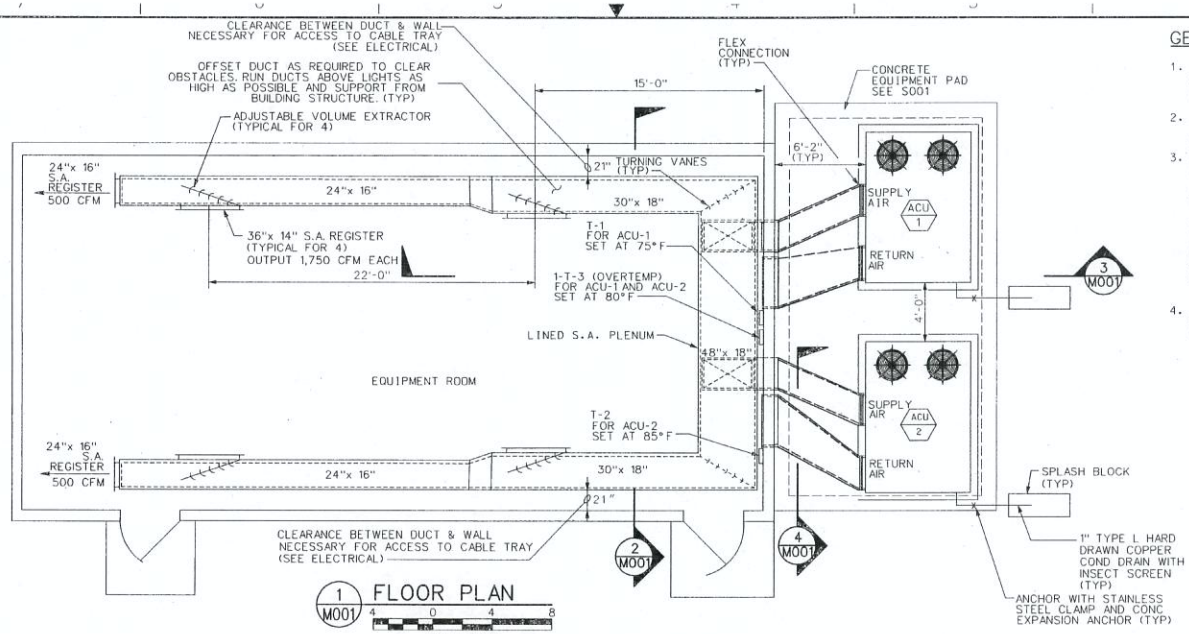
ISSUED FOR CONSTRUCTION



1 M001 FLOOR PLAN

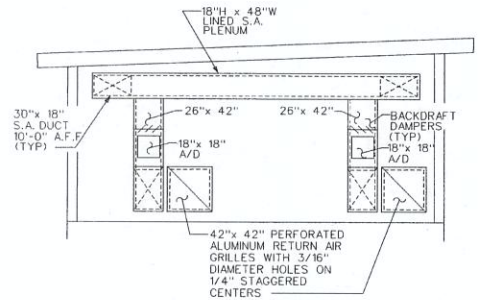
1/4" = 1'-0"

GENERAL NOTES

1. ALL DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS. ALL DUCT DIMENSIONS SHOWN FOR LINED DUCT TO BE INCREASED BY 2" TO ALLOW FOR INTERIOR LINING.
2. ALL SUPPLY AND RETURN DUCT TO BE INTERNALLY INSULATED WITH 1" THICK THERMAL DUCT LINER. NET FREE AREA SHOWN ON DRAWINGS.
3. ALL EXTERIOR DUCTS SHALL BE INTERNALLY LINED PER NOTE 2 AND SHALL ALSO BE EXTERNALLY INSULATED W/ 2" THICK DUCTBOARD INSULATION. ATTACH TO DUCT W/ APPROVED ADHESIVE AND MECHANICAL FASTENERS. SEAL ALL JOINTS WITH A VAPOR BARRIER TAPE AND COMPLETELY COVER WITH A WEATHERPROOF MASTIC IN ACCORDANCE WITH INSULATION MANUFACTURER'S RECOMMENDATIONS. EXTEND INSULATION THRU BUILDING WALL AND TERMINATE AT INTERIOR EXPOSURE. ENCLOSE ALL INSULATED EXTERIOR DUCTS WITHIN 0.040 ALUMINUM JACKET. CAULK AND SEAL WATERPROOF. SLOPE TOP OF DUCT INSULATION 1/4" PER FOOT TO ELIMINATE WATER PUDDLING ON TOP OF DUCTS.
4. ALL SUPPORTS, ANCHORS AND HARDWARE FOR AIR CONDITIONING UNITS AND DUCTS LOCATED OUTSIDE BUILDING SHALL BE STAINLESS STEEL.

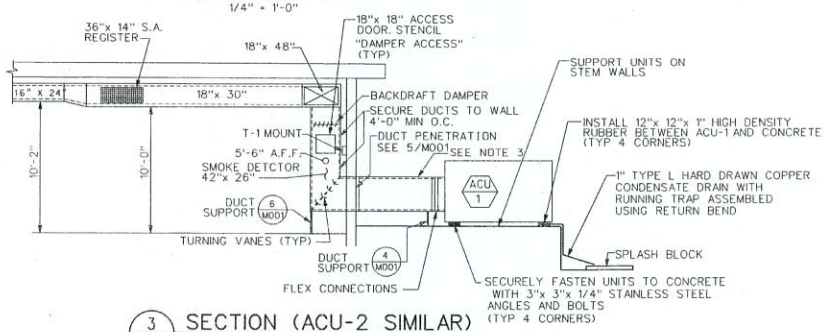
ABBREVIATIONS

A/D	- ACCESS DOOR
A.F.F.	- ABOVE FINISHED FLOOR
BD	- BAROMETRIC DAMPER
BOD	- BOTTOM OF DUCT
CFM	- CUBIC FEET PER MINUTE (ACTUAL)
CONN	- CONNECTION
DS	- DUCT SUPPORT
ELECT	- ELECTRICAL
EMERG	- EMERGENCY
FIN	- FINISH
FLA	- FULL LOAD AMPS
FLEX	- FLEXIBLE
FLR	- FLOOR
LRA	- LOCKED ROTOR AMPS
M	- MOTOR
MAX	- MAXIMUM
MIN	- MINIMUM
OA	- OUTSIDE AIR
OPER	- OPERATION/OPERATING
RA	- RETURN AIR
REG	- REGISTER
RLA	- RATED LOAD AMPS
SP	- STATUS PANEL
SA	- SUPPLY AIR
T	- ROOM THERMOSTAT
THK	- THICK
TOD	- TOP OF DUCT
TYP	- TYPICAL
VD	- VOLUME DAMPER
W/	- WITH



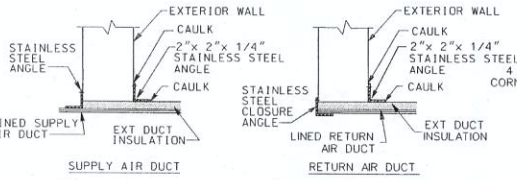
2 M001 SECTION

NOT TO SCALE



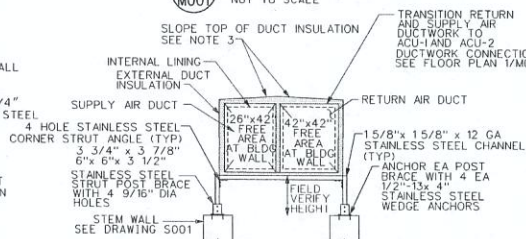
3 M001 SECTION (ACU-2 SIMILAR)

NOT TO SCALE



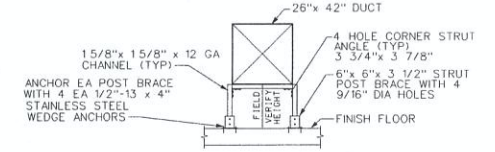
5 M001 DUCT PENETRATION DETAILS

NOT TO SCALE



4 M001 DUCT SUPPORT DETAIL-2 REQUIRED

NOT TO SCALE



6 M001 DUCT SUPPORT DETAIL-2 REQUIRED

NOT TO SCALE

REV	APPROVED DATE	DESCRIPTION	JCN	REQ'D DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS — EASTERN SERVICE AREA

ASR

BUILDING REPLACEMENT PROJECT HVAC PLANS AND SECTIONS

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

REVIEWED BY:
SUBMITTED BY: Neil Bolan, PROJECT ENGINEER
APPROVED BY: Robert B. Braddy, MGR: ENGINEERING - ATLANTA
DESIGNED: NB
DRAWN: DS
CHECKED:
ISSUED BY: ENGINEERING SERVICES SURV/WEATHER
DATE: 04/17/2010
JCN: 1000073
DRAWING NO: SJU-D-1000073-M001
REV:

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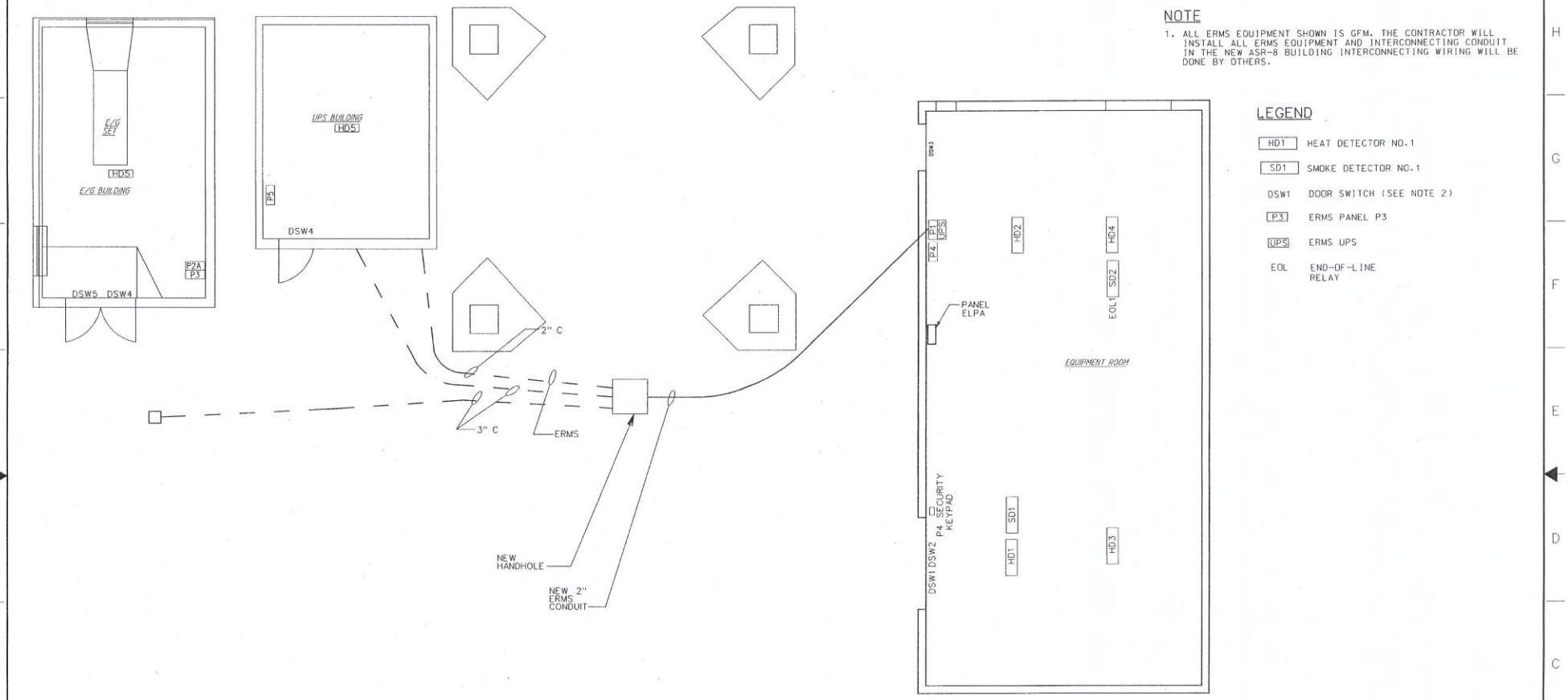

NOTE

1. ALL ERMS EQUIPMENT SHOWN IS GFM. THE CONTRACTOR WILL INSTALL ALL ERMS EQUIPMENT AND INTERCONNECTING CONDUIT IN THE NEW ASR-8 BUILDING INTERCONNECTING WIRING WILL BE DONE BY OTHERS.

LEGEND

HD1	HEAT DETECTOR NO.1
SD1	SMOKE DETECTOR NO.1
DSW1	DOOR SWITCH (SEE NOTE 2)
P3	ERMS PANEL P3
UPS	ERMS UPS
EOL	END-OF-LINE RELAY

1 / E013 ERMS PANELS
NOT TO SCALE

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS — EASTERN SERVICE AREA

ASR
BUILDING REPLACEMENT PROJECT
ERMS PANELS
FLOOR PLAN

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

REVIEWED BY	SUBMITTED BY: Neil Balen, PROJECT ENGINEER	APPROVED BY: Robert S. Roddy, MGR: ENGINEERING - ATLANTA
DESIGNED: NB	ISSUED BY: ENGINEERING SERVICES SURV/WEATHER	DATE: 04/17/2010
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		REV

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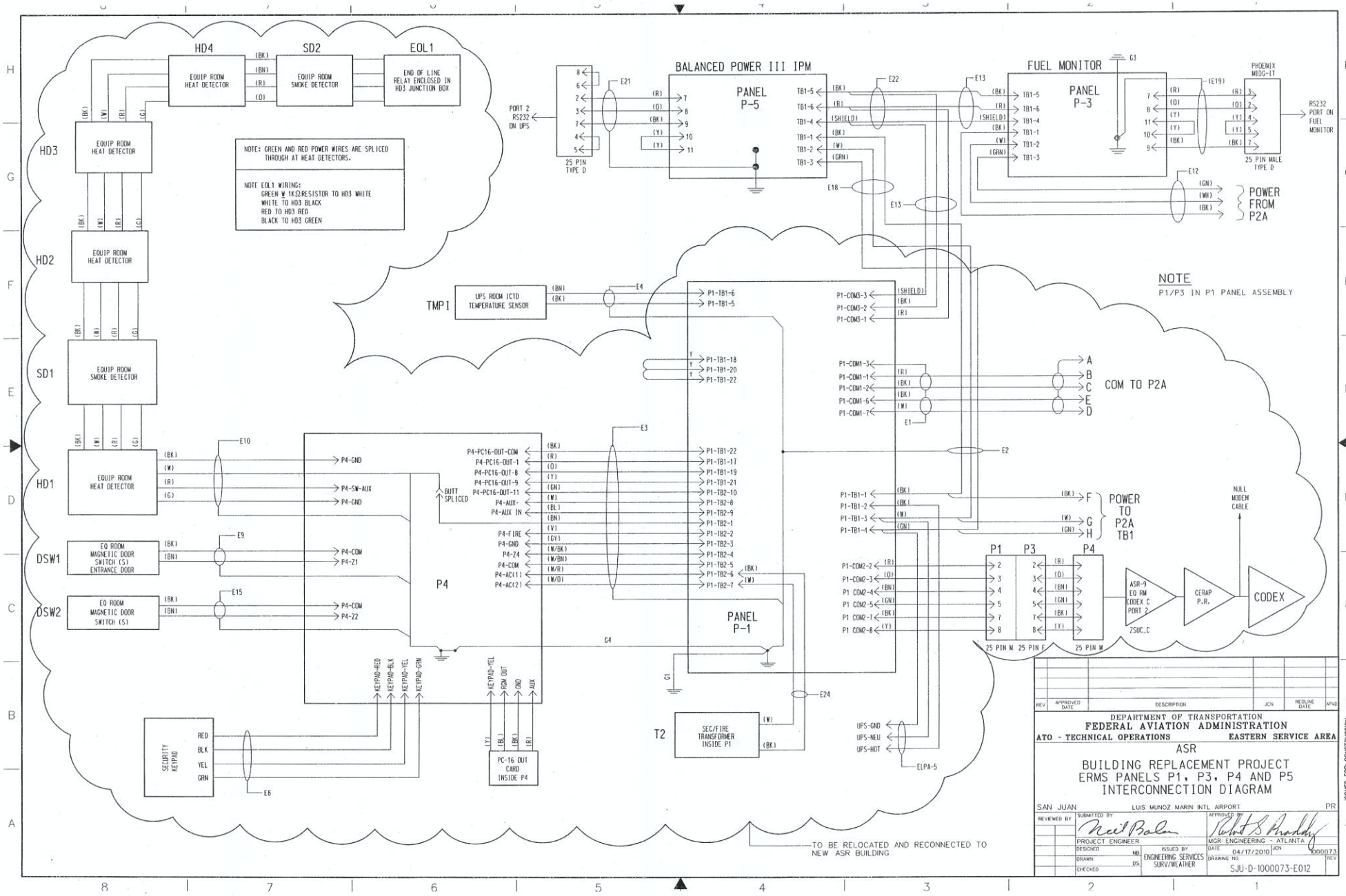

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS — EASTERN SERVICE AREA

ASR

BUILDING REPLACEMENT PROJECT ERMS PANELS P1, P3, P4 AND P5 INTERCONNECTION DIAGRAM

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJECT ENGINEER	MGR: ENGINEERING - ATLANTA

DESIGNED	NB	ISSUED BY	DATE	04/17/2010	JCN	1000073
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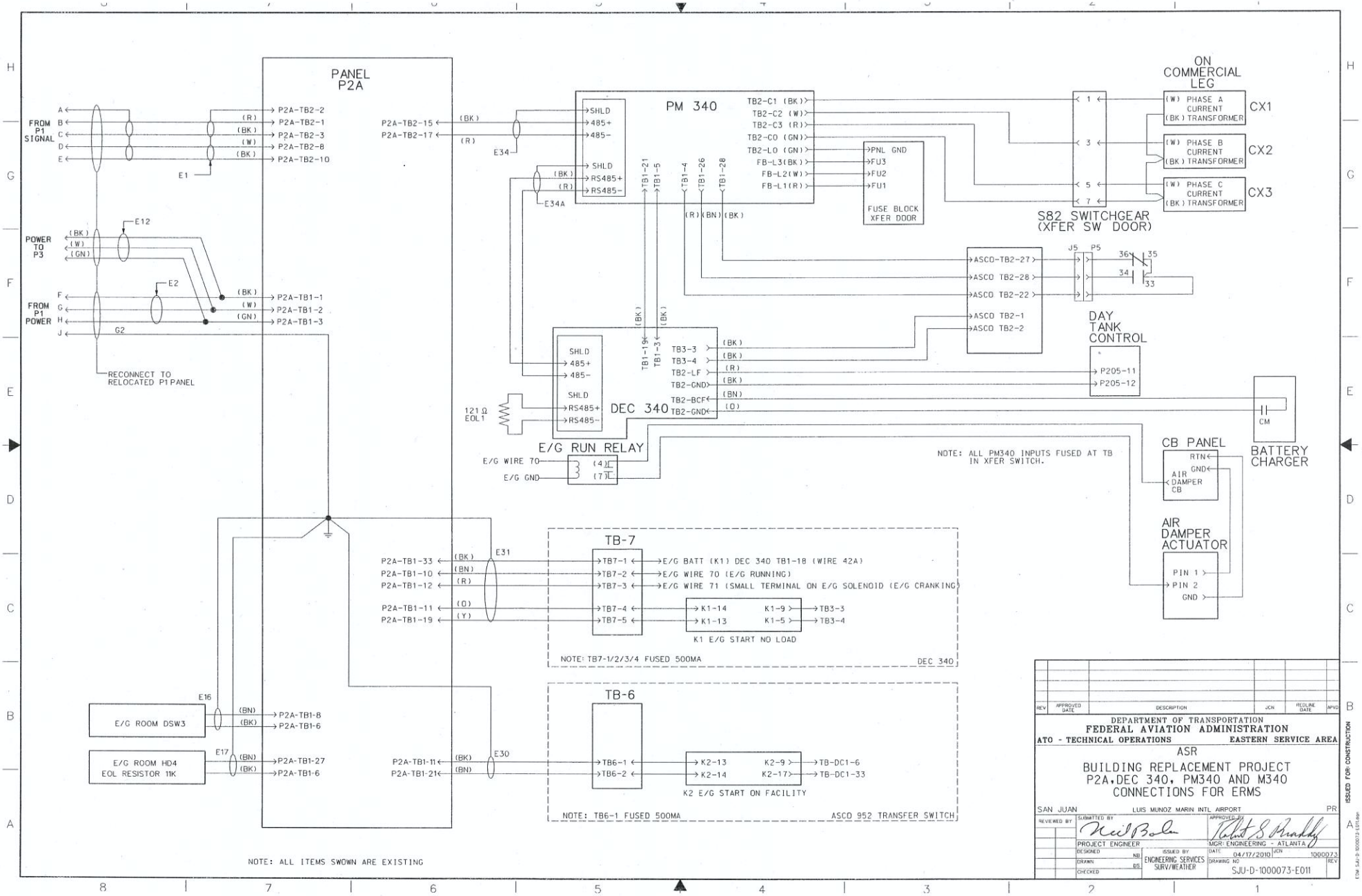

REV.	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS **EASTERN SERVICE AREA**

ASR

BUILDING REPLACEMENT PROJECT P2A, DEC 340, PM340 AND M340 CONNECTIONS FOR ERMS

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

REVIEWED BY	SUBMITTED BY	APPROVED BY
	Neil Bolan	Robert S. Bradley
	PROJECT ENGINEER	MGR: ENGINEERING - ATLANTA

DESIGNED	NB	ISSUED BY	DATE	04/17/2010	JCN	1000073
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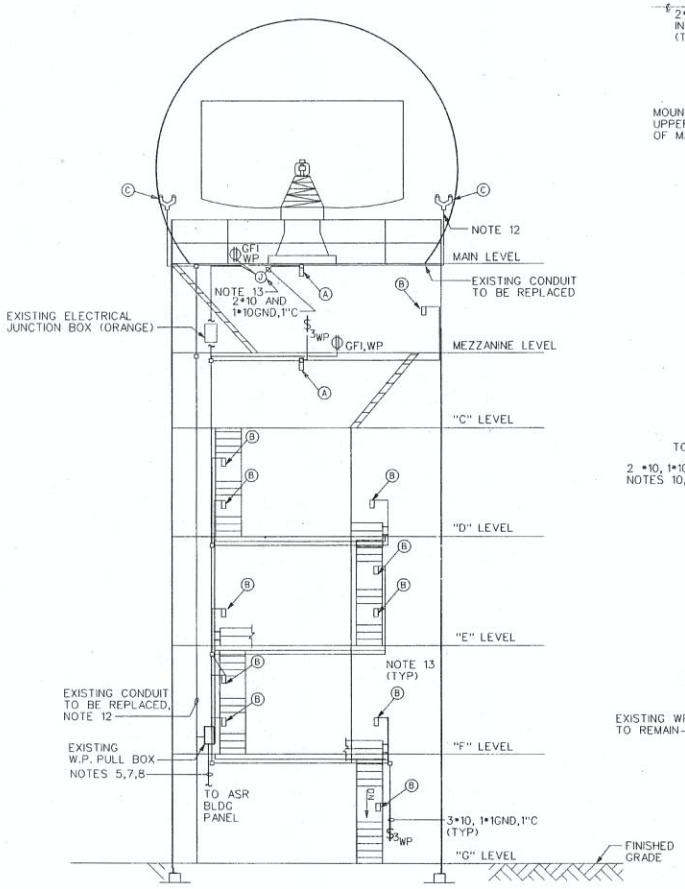
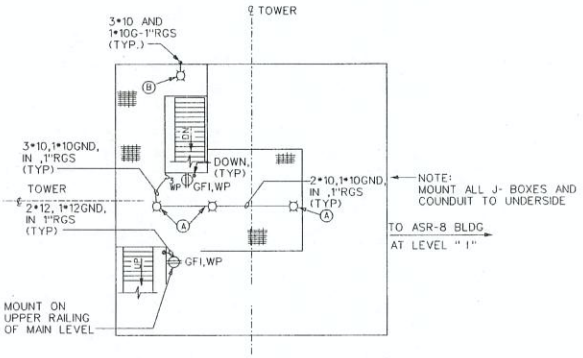


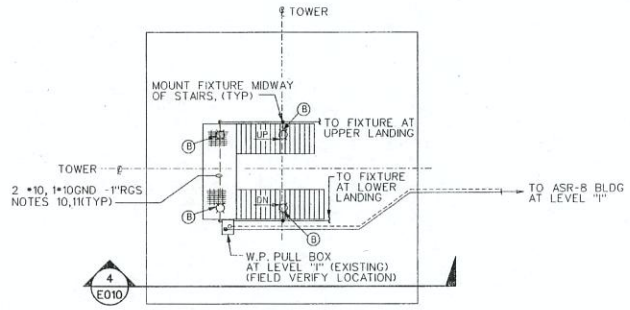
1 E010 TOWER ELEVATION - LIGHTING, POWER AND CONTROLS

NOT TO SCALE NOTES 1.2.3



2 E010 MEZZANINE FLOOR PLAN

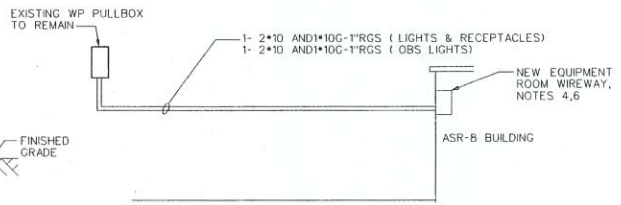
NOT TO SCALE NOTE 9



4 E010

3 E010 TYPICAL - PLATFORM PLAN

NOT TO SCALE



4 E010 POWER ROUTING ELEVATION

NOT TO SCALE

NOTES

1. SUBCONTRACTOR SHALL COMPLETE ALL WORK IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL, STATE AND LOCAL CODES AND COMPLIANCE WITH FAA STANDARDS FAA-C-1217F AND FAA-STD-19E.
2. REMOVE ALL EXISTING STAIRWELL LANDING LIGHTS , RECEPTACLES, SWITCHES AND ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE PANEL.
3. PROVIDE NEW STAIRWELL LANDING LIGHT FIXTURES, GFI CIRCUIT RECEPTACLES LIGHT SWITCHES, FEEDERS AND CONDUIT AS INDICATED.
4. ROUTE NEW WIRING TOASR BUILDING PANEL. INSTALL NEW CONDUIT AND WIRING FROM ASR BUILDING TO THE TOWER FOLLOW SAME PATH OF EXISTING CONDUIT FROM BUILDING TO TOWER.
5. GROUND ALL NEW CONDUITS TO EXISTING GROUND PLATE AT BASE OF TOWER WITH A #2 AWG BARE COPPER WIRE.
6. USE 20A CIRCUIT BREAKER FOR NEW LIGHTS AND RECEPTACLE, AND PROVIDE SEPARATE 120V, 20A CIRCUIT BREAKER FOR OBSTRUCTION LIGHTS, IN SOURCE PANEL "ELPA" INSIDE ASR BLDG EQUIPMENT ROOM (FIELD VERIFY EXACT LOCATION).
7. ALL NEW WIRING SHALL BE 600V. #10 AWG IN 1" RGS. UNO.
8. PROVIDE ALL NEW WIRING IN RIGID GALVANIZED STEEL CONDUIT (PVC COATED).
9. EXISTING ELECTRICAL EQUIPMENT IS NOT SHOWN FOR CLARITY. ALL ITEMS SHOWN ARE NEW. UNLESS NOTED OTHERWISE.
10. ALL CONDUITS SHALL BE SECURED TO TOWER IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. USE 12 GAUGE STAINLESS STEEL CHANNELS 1⅝". ALL CONDUIT SHALL BE ROUTED ON THE UNDERSIDES OF EACH LEVEL AND VERTICALLY UP/DOWN HANDRAILS, POST OR COLUMNS, SO AS NOT TO CAUSE OBSTRUCTIONS AND/OR TRIP HAZARDS
11. SUBCONTRACTOR SHALL PROVIDE ALL NECESSARY HARDWARE (I.E. CONDUIT, BOLTS, CLAMPS, ETC) FOR COMPLETE INSTALLATION OF THE NEW LIGHTING AND RECEPTACLES.
12. OBSTRUCTION LIGHT TO REMAIN AS IS. PROVIDE NEW FEEDERS AND CONDUIT FOR OBSTRUCTION LIGHTS FROM EXISTING EXTERIOR JUNCTION BOX (J-BOX) BACK TO SOURCE PANEL IN 1" RGS CONDUIT FROM J-BOX TO THE ASR BUILDING PANEL.
13. ALL SPLICES SHALL BE CONTAINED INSIDE NEMA 3R JUNCTION BOXES NOT SMALLER THAN 4" X 4" X 4" AS REQUIRED.

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	LAMP/WATTS	CATALOG NO.	NOTES
Ⓐ	VAPORTITE UTILITY FIXTURE WITH RUGGED ALUMINIUM HOUSING, WHITE GLASS DIFFUSER AND GUARD	FLOUR/ 1-42W	LITHONIA-VC42LM6 OR EQUIVALENT	MTG 7'-0" MAX AFF- CEILING MOUNTED
Ⓑ	VAPORTITE UTILITY FIXTURE WITH RUGGED ALUMINIUM HOUSING, WHITE GLASS DIFFUSER AND GUARD - JUNCTION BOX INCLUDED FOR CONDUIT MOUNTING	FLOUR/ 1-42W	LITHONIA-VW42LM6 OR EQUIVALENT	MTG 7'-0" MAX AFF- CONDUIT MOUNTED
Ⓒ	DUAL LIGHT LED EXISTING TO REMAIN	N/A	N/A	N/A

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS EASTERN SERVICE AREA

ASR

BUILDING REPLACEMENT PROJECT
STAIRWAY AND LANDINGS POWER AND LIGHTING MODIFICATIONS NOTES AND DETAILS

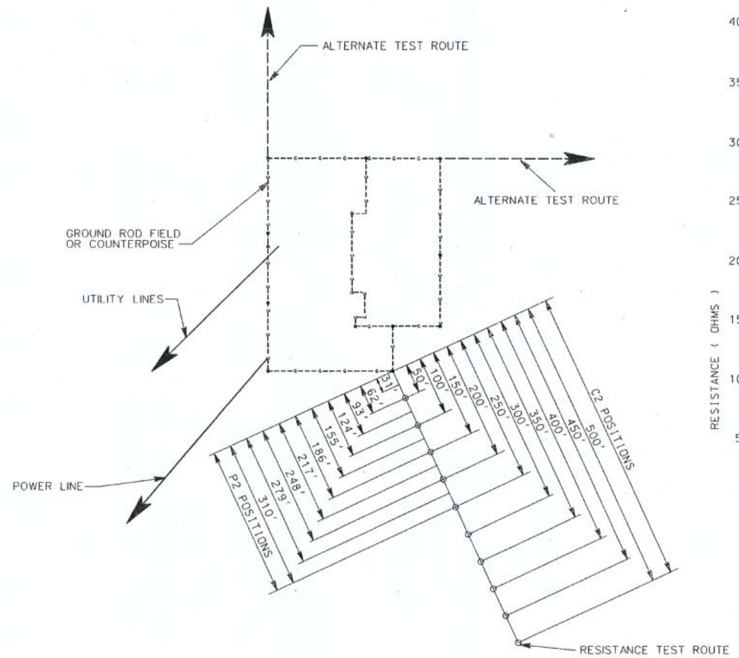
SAN JUAN LUIS MUNOZ MARIN INTL AIRPORT

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJECT ENGINEER	MGR: ENGINEERING - ATLANTA

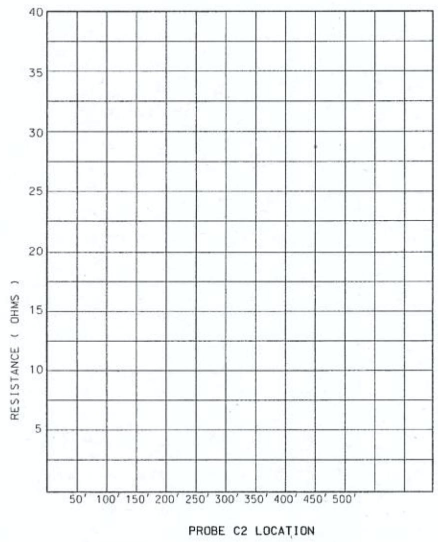
DESIGNED	NB	ISSUED BY	DATE	04/17/2010	JCN	1000073
DRAWN	DS	ENGINEERING SERVICES SURV/WEATHER	DRAWING NO	SJU-D-1000073-E010		REV
CHECKED						

ISSUED FOR: CONSTRUCTION

SJU-D-1000073-E010.dgn 3/17/2011 9:52:34 AM



A EARTH RESISTANCE AT ASR FACILITY
E009 NOT TO SCALE

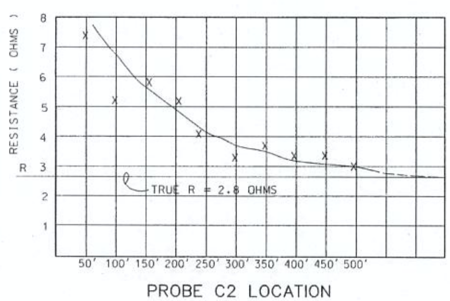


C2 PROBE DISTANCE	P2 PROBE DISTANCE (.62 X C2)	RESISTANCE METER READING OHMS
50'		
100'		
150'		
200'		
250'		
300'		
350'		
400'		
450'		
500'		

DEPTH OF REFERENCE RODS ______
RESISTANCE = ______

B RESISTANCE MEASUREMENT WORKSHEET
E009 NOT TO SCALE

RESISTANCE TEST DATE:
TIME:
INSTRUMENT USED: MODEL
S/N
MCN
CAL. DATE
NEW CAL. DUE
WITNESSED BY:



C2 PROBE DISTANCE	P2 PROBE DISTANCE (.62 X C2)	RESISTANCE METER READING OHMS
50'	31'	7.5
100'	62'	5.2
150'	93'	5.9
200'	124'	5.2
250'	155'	4.2
300'	186'	3.4
350'	217'	3.8
400'	248'	3.4
450'	279'	3.4
500'	310'	3.1

DEPTH OF REFERENCE RODS 12"
RESISTANCE = 2.8 OHMS

C SAMPLE OF A COMPLETE RESISTANCE MEASUREMENT WORKSHEET
E009 NOT TO SCALE

NOTES

1. THE S.C.E., WITH THE ASSISTANCE OF A QUALIFIED ELECTRICIAN FURNISHED BY THE CONTRACTOR, SHALL PREPARE A NEAT SKETCH OF THE FACILITY GROUND SYSTEM SIMILAR TO THAT SHOW IN DETAIL A. THIS SKETCH TOGETHER WITH THE RESISTANCE MEASUREMENT WORKSHEET (DET. B) WILL BECOME PART OF THE PERMANENT FACILITY FILE. THE S.C.E. SHALL LEAVE THE ORIGINAL WITH THE FACILITY AND SEND A COPY TO THE REGIONAL OFFICE.

2. MEASURE THE RESISTANCE OF THE ELECTRODE SYSTEM WITH AN INSTRUMENT DESIGNED FOR THE PURPOSE OF USING THE FALL OF POTENTIAL METHOD (SUCH AS THE BIDDLE NULL BALANCE EARTH TESTER). PROCEED AS FOLLOWS :

   A) CONNECT THE TERMINALS MARKED C1 AND P1 TOGETHER AND CONNECT THEM TO THE ELECTRODE UNDER TEST.

   B) POSITION THE C2 PROBE ALONG A LINE WHICH MAXIMIZES THE DISTANCE FROM THE ELECTRODE UNDER TEST AND FROM OTHER BURIED METALS SUCH AS UTILITY PIPES, POWER AND SIGNAL CABLES, FUEL TANKS, ETC. IN CHOOSING THE DIRECTION FOR PLACEMENT OF THE C2 PROBE, EXAMINE THE CONFIGURATION OF THE ELECTRODE SYSTEM FOR THE FACILITY AND DETERMINE THE LOCATION OF ALL SUCH BURIED METALS. THEN LOCATE THE PROBE AS FAR AS POSSIBLE FROM THESE METALS AS ILLUSTRATED IN DET. A. KEEP C2 AND P2 LEADS SEPARATED AS FAR AS POSSIBLE.

   C) POSITION THE C2 PROBE AT DISTANCES AS SHOWN IN DET. C. RECORD THE METER READINGS FOR EACH C2 & P2 PROBE POSITION. (NOTE THAT THE P2 POSITIONS ARE 62% OF THE C2 POSITIONS). IT MAY NOT BE NECESSARY TO PLOT THE FULL 500'. PLOT ENOUGH POINTS TO ACCURATELY DETERMINE WHERE THE CURVE LEVELS OFF.

   D) PLOT ON A GRAPH SIMILAR TO DET. C AS MANY RECORDED RESISTANCE READINGS VERSUS THE CORRESPONDING C2 PROBE POSITIONS AS NECESSARY TO DETERMINE WHERE THE CURVE LEVELS OFF.

   E) THE TRUE VALUE OF RESISTANCE CAN BE ESTIMATED BY EXTRAPOLATING THE CURVE TO IT'S ASYMPTOTIC VALUE.

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

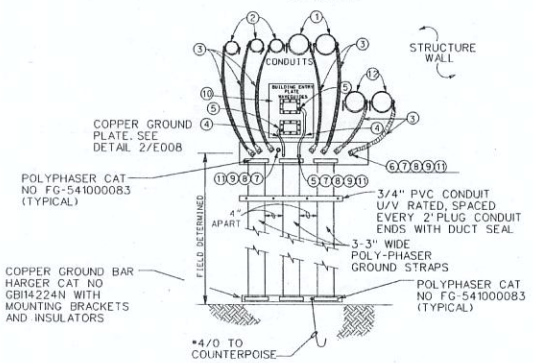
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS — EASTERN SERVICE AREA
ASR
BUILDING REPLACEMENT PROJECT
EARTH GROUND RESISTANCE TESTING
INSTRUCTIONS AND PROCEDURES

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

REVIEWED BY | SUBMITTED BY: PROJECT ENGINEER | APPROVED BY: MGR. ENGINEERING - ATLANTA
DESIGNED NB | DRAWN DS | CHECKED | ISSUED BY ENGINEERING SERVICES SURV/WEATHER
DATE 04/17/2010 | JCN 1000073 | REV
DRAWING NO SJU-D-1000073-E009

ISSUED FOR: CONSTRUCTION

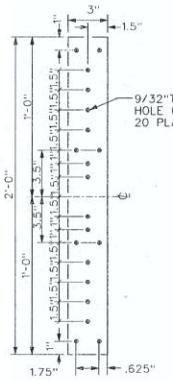
MATERIAL LIST 1/E008		
ITEM	QTY	DESCRIPTION
1	2	T&B U-BOLT 3904 BU BRONZE
2	2	T&7B U-BOLT 3902 BU BRONZE
3	20'	4/0 AWG. INSULATED CONDUCTOR
4	6'	#6 AWG THHN INSULATED. GREEN
5	4	T&B CRIMP LUG FOR #6 AWG 54105
6	4	T&B CRIMP LUG FOR 4/0 AWG 54167
7	7	BOLT. MACHINE 1/4"x1"18-8 SS
8	20	WASHER. SPRING LOCK 1/4"18-8 SS
9	20	WASHER 1/4"BOLT 18-8 SS
10	1	POLY-PHASER UNI-KIT #2CC
11	7	NUT 1/4"x20 18-8 SS
12	2	T&B U-BOLT 3903 BU BRONZE



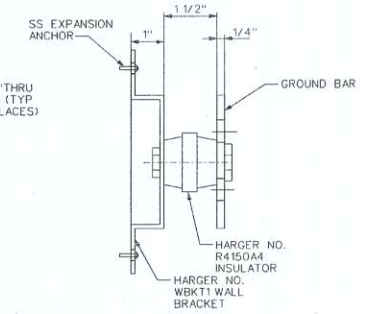
NOTES 1/E008

1. DO NOT CROSS CONDUCTOR WHEN ROUTING TO GROUND PLATE.
2. MAKE CONDUIT CLAMP CONNECTIONS AS CLOSE AS POSSIBLE TO BUILDING ENTRY POINT.
3. MINIMUM 8" RADIUS ON ALL CONDUCTORS.
4. TREAT ALL COMPRESSION FITTINGS WITH "NO OX" BEFORE ASSEMBLY.

1/E008 ASR-8 WALL MOUNT GROUNDING PLATE
NOT TO SCALE



GROUND BAR



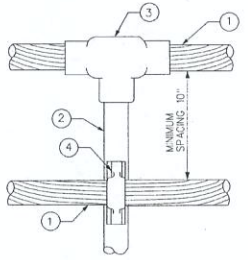
WALL BRACKET TYPICAL OF FOUR

NOTES:
1. SILICONE CAULK ALL CERAMIC STANDOFF THREADS. HAND TIGHTEN ONLY.
2. HOLE SIZES MAY BE MODIFIED AS NECESSARY.

2/E008 WALL MOUNT GROUNDING PLATE
NOT TO SCALE

NOTES

1. DO NOT CROSS CONDUCTORS WHEN ROUTING TO GROUND PLATE.
2. MINIMUM 8" RADIUS ON ALL CONDUCTORS.
3. TREAT ALL COMPRESSION FITTINGS WITH "NO OX" BEFORE ASSEMBLY.
4. CUT ALL CONDUCTORS TO APPROPRIATE LENGTHS.
5. ALL ITEMS/WORK SHOWN ON THIS DRAWING ARE NEW.



3/E008 COUNTERPOISE CADWELD
NOT TO SCALE

MATERIAL LIST 3/E008		
ITEM	QTY	DESCRIPTION
1	AS REQ'D	4/0 AWG BARE, 19-STRANDED COPPER COND.
2	1	GROUND ROD 3/4"x 10' COPPER CLAD 19 MIL
3	AS REQ'D	CADWELD TYPE GTC-182Q, CHARGE #115
4	AS REQ'D	CADWELD TYPE GYE-182Q, CHARGE #150

REV	APPROVED DATE	DESCRIPTION	JCN	HLDR/PR. DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS — EASTERN SERVICE AREA

ASR

BUILDING REPLACEMENT PROJECT
ELECTRICAL DETAILS AND SCHEDULES
SHEET 2 OF 2

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJECT ENGINEER	MGR: ENGINEERING - ATLANTA

DESIGNED NB | DRAWN DS | CHECKED | ISSUED BY: ENGINEERING SERVICES SURV/WEATHER

DATE 04/17/2010 | JCN 1000073 | DRAWING NO SJU-D-1000073-E008 | REV

ISSUED FOR: CONSTRUCTION
D1000204492

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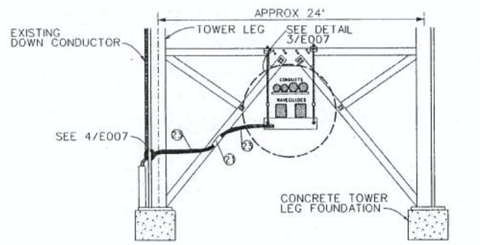
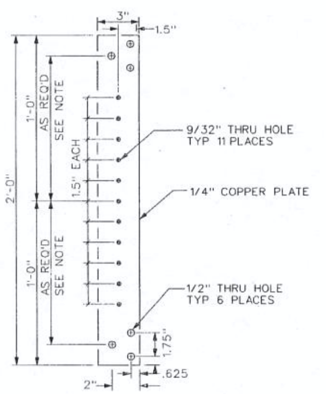
MATERIAL LIST 1/E007

ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
1	2	T&B U-BOLT 3904 BU BRONZE	13	10	WASHER, SPRING LOCK 1/2" 18-8 S.S.
2	2	T&TB U-BOLT 3903 BU BRONZE	14	12	WASHER FOR 1/2" BOLT 18-8 S.S.
3	20'	4/0 AWG, INSULATED COPPER	15	4	T&B CRIMP LUG FOR #6 AWG 54105
4	2	ADJUSTABLE 2- PIECE CLIP	16	6'	WIRE, #6 AWG THHN, INS, GREEN
5	2	COUPLING NUT 1/2"x 13 x 1 1/4" LONG 18-8 S.S.	17	1	POLY-PHASER UNI-KIT #2CC
6	2	ALL-THREAD 1/2"x 13x 2' 18-8 S.S.	18	7	NUT, 1/4"x 20 S.S.
7	2	ALL-THREAD 1/2"x 13 x 1' 18-8 S.S.	19	2	UNISTRUT ANGLE, P1026 STAINLESS STEEL
8	4	T&B CRIMP LUG FOR 4/0 AWG 54167	20	2	BOLT, MACHINE 1/2"x 1 1/2", 18-8 STAINLESS STEEL
9	14	WASHER FOR 1/4" BOLT 18-8 S.S.	21	AS REQ'D	THOMPSON CAT. NO.-142HD BRONZE BONDING CLAMP, SEE NOTE 1
10	7	WASHER, SPRING LOCK 1/4" 18-8 S.S.	22	1	CADWELD, 2HL LUG, MOLD GLC-DE-20, CHARGE #65, LUG #B122DE
11	7	BOLT, MACHINE 1/4"x 18-8 S.S.	23	AS REQ'D	4/0 AWG, 19 STRANDED COPPER, BARE
12	10	NUT 1/2" 18-8 S.S.			



1 E007 ELEVATION GROUND PLATES AT TOWER BASE

NOT TO SCALE

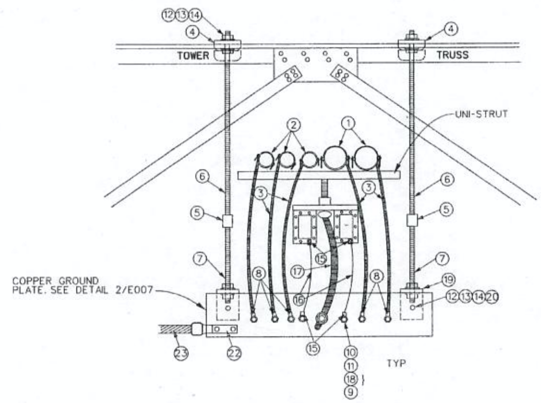


NOTE:

FIELD DRILL SUSPENSION HOLES AS REQUIRED FOR MOUNTING TO UNI-STRUT.

2 E007 ASR-8 TOWER LEG MOUNTED GROUNDING PLATE

NOT TO SCALE



NOTES:

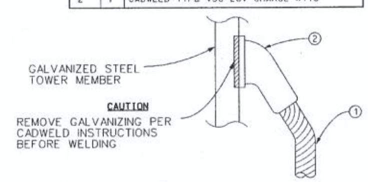
1. DO NOT CROSS CONDUCTORS WHEN ROUTING TO GROUND PLATE.
2. MINIMUM 8" RADIUS ON ALL CONDUCTORS.
3. TREAT ALL COMPRESSION FITTINGS WITH "NO OX" BEFORE ASSEMBLY.
4. CUT ALL CONDUCTORS TO APPROPRIATE LENGTHS.

3 E007 DETAIL- ASR-8 GROUNDING PLATE MOUNTING AND CONNECTIONS AT TOWER BASE

NOT TO SCALE

MATERIAL LIST 4/E07

ITEM	QTY	DESCRIPTION
1	AS REQ'D	4/0 AWG BARE, 19-STRANDED COPPER COND.
2	1	CADWELD TYPE VSC-20, CHARGE #115



4 E007 TOWER LEG CADWELD (TYPICAL OF 2)

NOT TO SCALE

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS EASTERN SERVICE AREA

ASR

BUILDING REPLACEMENT PROJECT
ELECTRICAL DETAILS AND SCHEDULES
SHEET 1 OF 2

SAN JUAN LUIS MUNOZ MARIN INTL AIRPORT PR

REVIEWED BY | SUBMITTED BY: PROJECT ENGINEER | APPROVED BY: MGR: ENGINEERING - ATLANTA
DESIGNED NB | DRAWN DS | CHECKED | ISSUED BY ENGINEERING SERVICES SURV/WEATHER | DATE 04/17/2010 | JCN 1000073 | DRAWING NO SJU-D-1000073-E007 | REV

ISSUED FOR CONSTRUCTION

EDM: SJU-D-1000073-E007.dgn

ELECTRONICS DISTR PANEL CPA CHANNEL-A			100 AMP MAIN LUGS, 120/208, 30,/4W U.L. LISTED BREAKER INTERRUPTING CAPACITY:22,000 RMS SYM AMP					
LOAD	WATTS	CKT NO.	BKR. SIZE	PHASE	BKR. SIZE	CKT NO.	WATTS	LOAD
SPARE		1	15	A B C	15	2		SPARE
		3	15		15	4		
		5	15		15	6		
		7	15		15	8		
		9	15		15	10		
A2 RADAR CBL JB	500	11	20		20	12		
U1 TRANS,LTG&REC(TB4)	500	13	20		30	14		
U1 TRANSMITTER	6720	15				16	1440	24V DC
(TB3)	6720	17	70		15	18	1440	PREREGULATOR
	6720	19				20	1440	(A2) (TB3)
SPACE		21				22		SPACE
		23				24		
		25				26		
		27				28		
		29				30		
CONNECTED LOAD				PHASE A 8660 PHASE B 8160 PHASE C 8660	MAIN LUG ONLY AT 100 A FEEDER SIZE: 4•2&1•6 GRD (GREEN) CONDUIT SIZE: 2" C			

NOTE:
EQUIPMENT IDENTIFIED IN THIS PANEL SCHEDULE IS FOR INFORMATION ONLY.
EQUIPMENT WILL BE FURNISHED, INSTALLED AND CONNECTED BY OTHERS.

PANEL ELPA			125 AMP MLO 120/208, 3Ø, 4W U.L. LISTED BREAKER INTERRUPTING CAPACITY:22,000 RMS SYM AMP					
LOAD	WATTS	CKT NO.	BKR. SIZE	PHASE	BKR. SIZE	CKT NO.	WATTS	LOAD
EQ RM RCPT	390	1	20	A B C	20	2	1500	EQ RM LTS
EQ RM RCPT	390	3	20		20	4	1500	EQ RM LTS
ERMS UPS		5	20		20	6	1080	SPARE
UPS BAT. MON.	1080	7	20		20	8	600	TOWER LTG-STAIRS
OBSTR LTG	400	9	20			10		TVSS
TOWER LTG	1000	11	20		30			
SPARE		13	20					
TOWER RECEPTS	180	15	20		20	16		SPARE
SPARE		17	20		20	18		
		19	20		20	20		
		21	20		20	22		
		23	20		20	24		
		25	20		20	26		
		27	20		20	28		
		29	20		20	30		
CONNECTED LOAD				PHASE A 4570 PHASE B 3200 PHASE C 3080				

ELECTRONICS DISTR PANEL CPB CHANNEL-B			100 AMP MAIN LUGS, 120/208, 30,/4W U.L. LISTED BREAKER INTERRUPTING CAPACITY:22,000 RMS SYM AMP					
LOAD	WATTS	CKT NO.	BKR. SIZE	PHASE	BKR. SIZE	CKT NO.	WATTS	LOAD
SPARE		1	15	A B C	15	2		SPARE
		3	15		15	4		
		5	15		15	6		
		7	15		15	8		
		9	15		15	10		
A2 RADAR CBL JB	500	11	20		20	12		
U1 TRANS,LTG&REC(TB4)	500	13	20		30	14		
U1 TRANSMITTER	6720	15				16	1440	24V DC
(TB3)	6720	17	70		15	18	1440	PREREGULATOR
	6720	19				20	1440	(A2) (TB3)
SPACE		21				22		SPACE
		23				24		
		25				26		
		27				28		
		29				30		
CONNECTED LOAD				PHASE A 8660 PHASE B 8160 PHASE C 8660	MAIN LUG ONLY AT 100 A FEEDER SIZE: 4•2&1•6 GRD (GREEN) CONDUIT SIZE: 2" C			

NOTE:
EQUIPMENT IDENTIFIED IN THIS PANEL SCHEDULE IS FOR INFORMATION ONLY.
EQUIPMENT WILL BE FURNISHED, INSTALLED AND CONNECTED BY OTHERS.

ANTENNA DISTRIBUTION PANEL CP1			100 AMP MAIN LUGS, 120/208, 30,/4W U.L. LISTED BREAKER INTERRUPTING CAPACITY:22,000 RMS SYM AMP					
LOAD	WATTS	CKT NO.	BKR. SIZE	PHASE	BKR. SIZE	CKT NO.	WATTS	LOAD
ATCBI-4 CH1	300	1	20	A B C	70	2	2004	ANTENNA
ATCBI-4 CTU	200	3	20			4	2004	CONTROL
ATCBI-4 CH1 CONV REC	200	5	20			6	2004	CABINET
ISM	200	7	20		20	8	200	ATCBI-4 CH2 CONV REC
ISM CONV REC	200	9	20		20	10	200	ATCBI-4 NO CNTL LTS
SPARE		11	20		20	12	300	ATCBI-4 CH 2
		13	20		20	14		SPARE
		15			20	16		SPARE
TVSS		17			20	18		SPARE
		19	30		20	20		SPARE
CONNECTED LOAD				PHASE A 3179 PHASE B 3079 PHASE C 2979	MAIN LUG ONLY AT 100 A FEEDER SIZE: 4•2&1•6 GRD (GREEN) CONDUIT SIZE: 2" C			

NOTE:

EQUIPMENT IDENTIFIED IN THIS PANEL SCHEDULE IS FOR INFORMATION ONLY.
EQUIPMENT WILL BE FURNISHED, INSTALLED AND CONNECTED BY OTHERS.

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS EASTERN SERVICE AREA

ASR
BUILDING REPLACEMENT PROJECT
PANEL SCHEDULES

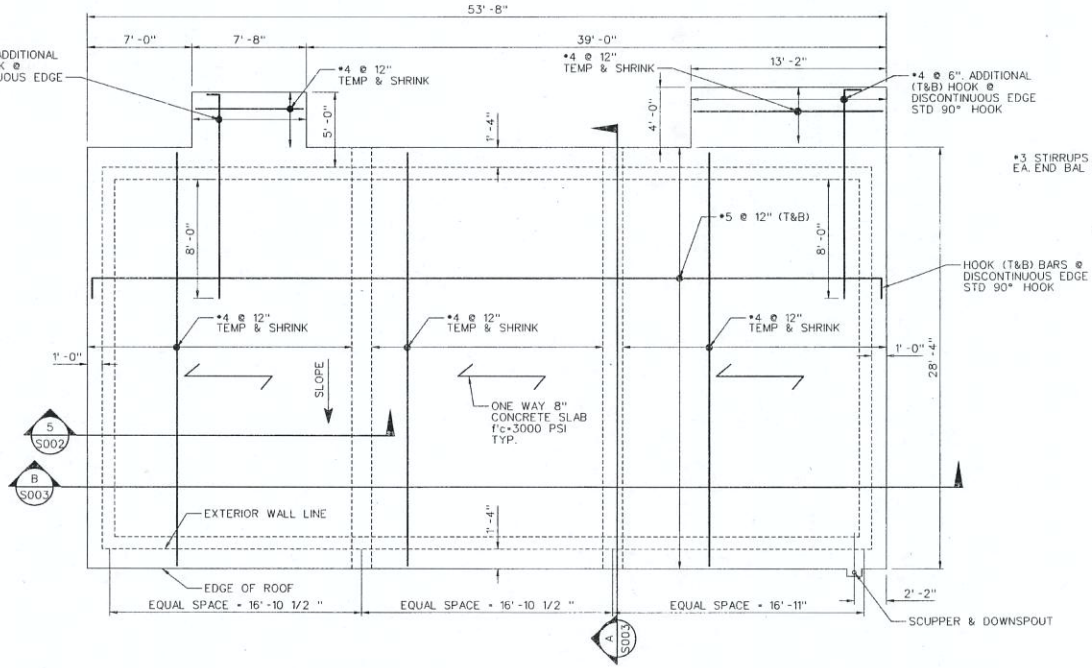
SAN JUAN LUIS MUNOZ MARIN INTL AIRPORT PR

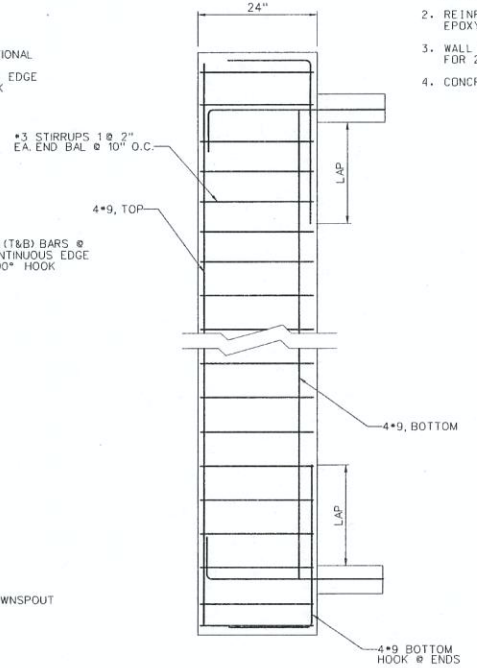
REVIEWED BY | SUBMITTED BY: PROJECT ENGINEER | APPROVED BY: MGR: ENGINEERING - ATLANTA
DESIGNED NB | DRAWN DS | CHECKED
ISSUED BY ENGINEERING SERVICES SURV/WEATHER
DATE 04/17/2010 | JCN 1000073 | REV
DRAWING NO SJU-D-1000073-E006

ISSUED FOR: CONSTRUCTION

NOTES

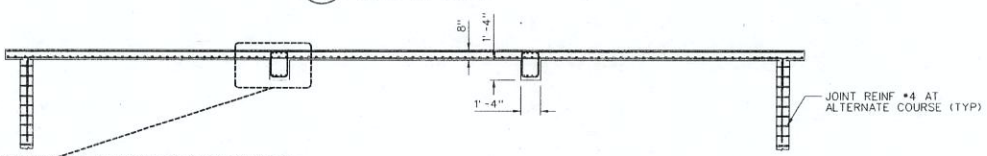
1. EPOXY COATED REINFORCING STEEL TO BE PLACED 1 1/2" FROM EDGE AT 6" ON CENTER EACH WAY. STANDARD LAP JOINTS REQUIRED.
2. REINFORCING BARS TO BE PLACED WITH EPOXY COATED CHAIRS.
3. WALL TO ROOF HOOKS SHALL BE #5 AT 6" FOR 24" DEEP EACH WAY.
4. CONCRETE SLAB TO REMAIN SHORED UNTIL CURED.



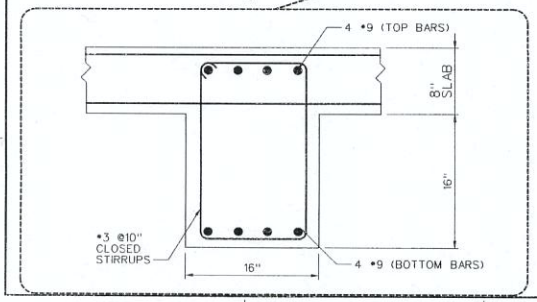


1 S003 **CONCRETE ROOF PLAN**
SCALE: 1/4" = 1'-0"

A S003 **SECTION**
SCALE: 1" = 1'-0"



B S003 **SECTION**
SCALE: 1/4" = 1'-0"



4' 0 4' 8'
SCALE: 1/4" = 1'-0"

1' 0 1' 2'
SCALE: 1" = 1'-0"

REV.	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
ATO - TECHNICAL OPERATIONS — EASTERN SERVICE AREA

ASR

BUILDING REPLACEMENT PROJECT CONCRETE ROOF AND REINFORCING PLAN

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

REVIEWED BY	SUBMITTED BY: Neil Bala, PROJECT ENGINEER	APPROVED BY: Robert S. Bradley, MGR: ENGINEERING - ATLANTA	
DESIGNED: NB	ISSUED BY: ENGINEERING SERVICES SURV/WEATHER	DATE: 04/17/2010	JCN: 100073
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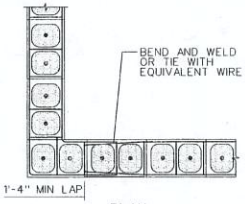
CONCRETE MASONRY UNIT WALL REINFORCING LAP LENGTH SCHEDULE	
TENSION OR COMPRESSION LAP SPLICE LENGTHS, (INCHES) FOR GRADE 60	
BAR SIZE	LAP LENGTH
#3	27
#4	36
#5	45
#6	54
#7	63
#8	72
#9	82

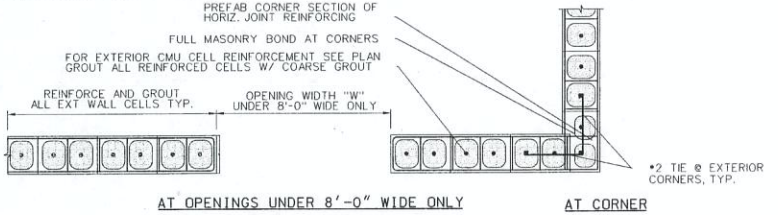
NOTES
1. LAP SPLICE LENGTHS ARE BASED ON IBC 2006 SECTION 2107.5 AND 2107.6

1 S002 CMU REINFORCING SCHEDULE
NOT TO SCALE



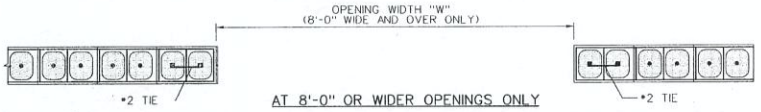
PLAN

4 S002 JOINT REINFORCING AT INTERSECTING CMU WALLS
NOT TO SCALE



AT OPENINGS UNDER 8'-0" WIDE ONLY

AT CORNER

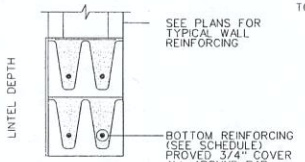


AT 8'-0" OR WIDER OPENINGS ONLY

7 S002 TYPICAL CMU WALL AND TIE COLUMN REINFORCING PLANS
NOT TO SCALE

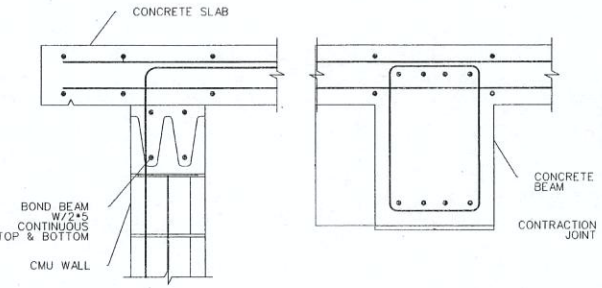
LINTEL REINFORCEMENT		
WALL OPENING	LINTEL DEPTH	REINFORCING
UP TO 4'-0"	8"	2#4 BOTTOM
4'-0" TO 6'-0"	16"	2#5 BOTTOM
6'-0" TO 8'-0"	16"	2#5 BOTTOM
8'-0" TO 10'-0"	16"	2#6 BOTTOM

OVER 10'-0" CONSULT ENGINEER

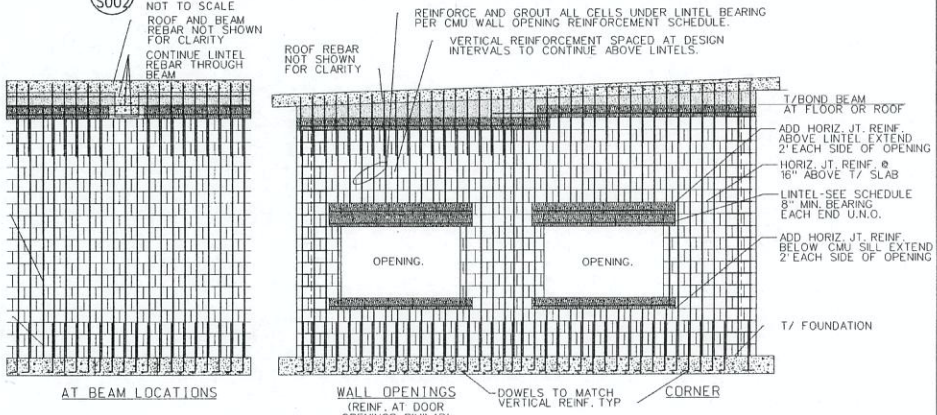


SECTION

2 S002 CMU WALL LINTEL SCHEDULE
NOT TO SCALE



5 S002 SECTION AT SLAB EDGE
NOT TO SCALE



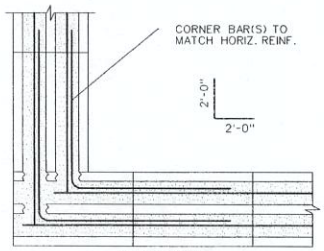
AT BEAM LOCATIONS

WALL OPENINGS (REINF. AT DOOR OPENINGS SIMILAR)

DOWELS TO MATCH VERTICAL REINF. TYP

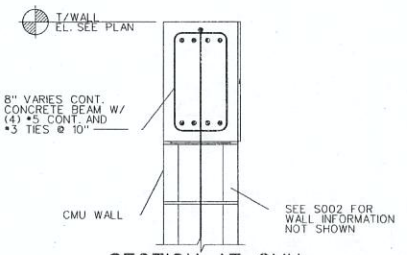
CORNER

8 S002 TYPICAL CMU WALL REINFORCING- ELEVATION
NOT TO SCALE

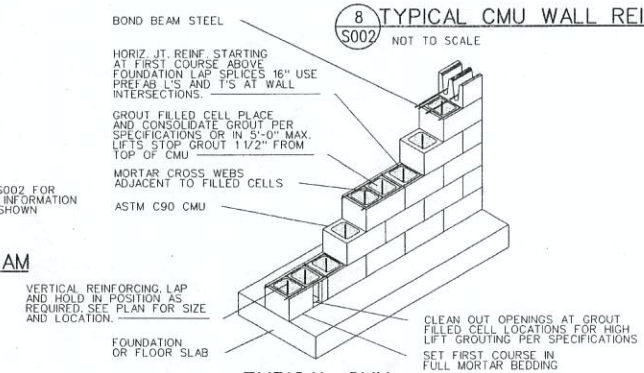


AT CORNER

3 S002 BOND BEAM REINFORCING AT INTERSECTING CMU WALLS
NOT TO SCALE



6 S002 SECTION AT CMU WALL WITH TIE BEAM
NOT TO SCALE



9 S002 TYPICAL CMU WALL CONSTRUCTION
NOT TO SCALE

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BUILDING REPLACEMENT PROJECT MISCELLANEOUS FOUNDATIONS WALL DETAILS AND PLANS

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

REVIEWED BY	SUBMITTED BY	APPROVED BY
	PROJECT ENGINEER	MGR: ENGINEERING - ATLANTA
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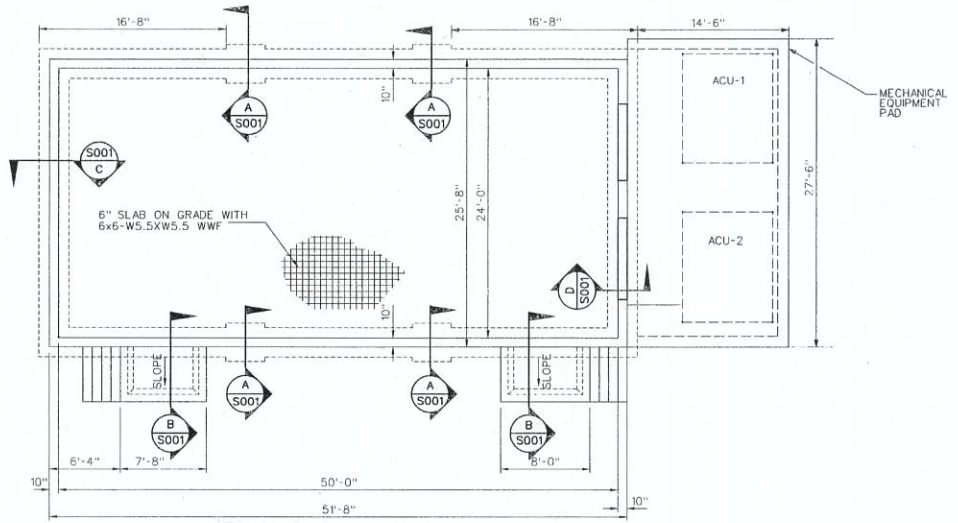
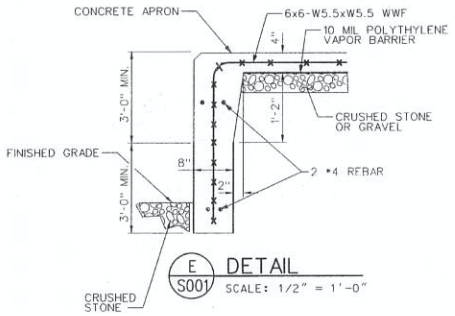


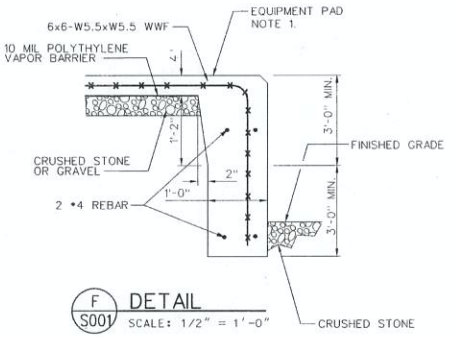
1 S001 FOUNDATION PLAN

SCALE: 3/16" = 1'-0"



E S001 DETAIL

SCALE: 1/2" = 1'-0"

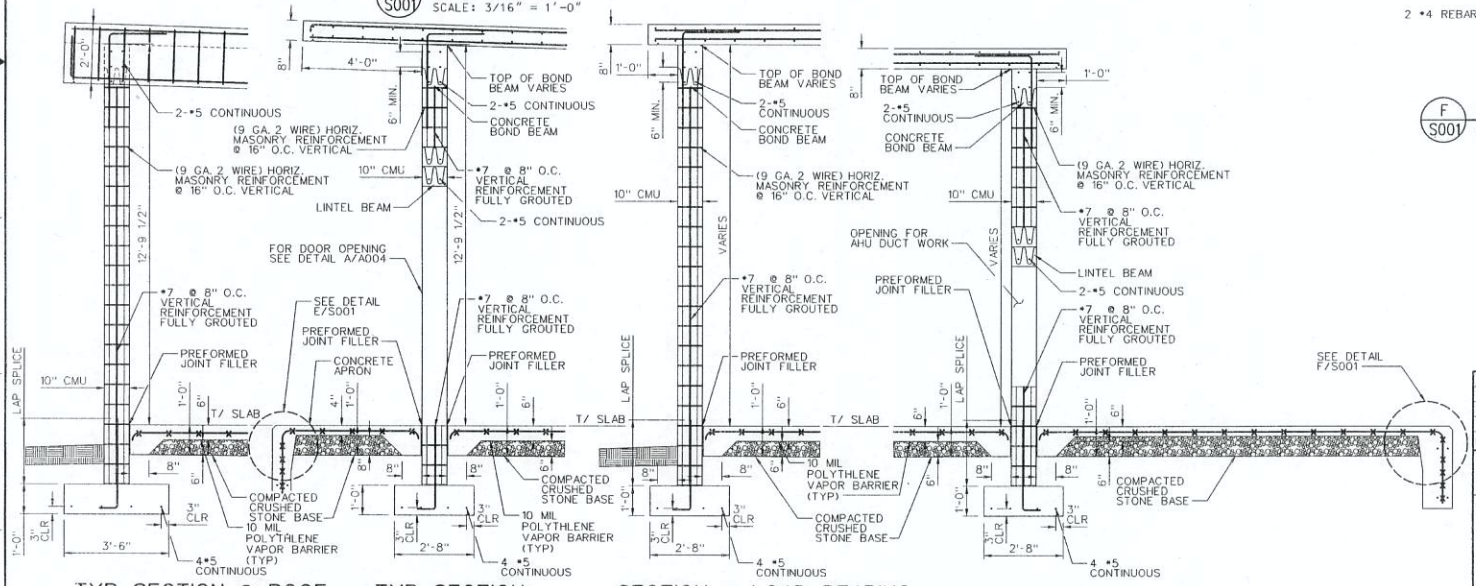


F S001 DETAIL

SCALE: 1/2" = 1'-0"

NOTES

1. EQUIPMENT PAD TO HAVE 1/2" X 6" EXPANSION BOLTS FOR A/C UNITS TO BE FIELD LOCATED.



A S001 TYP. SECTION @ ROOF BEAM LOCATIONS

SCALE: 1/2" = 1'-0"

B S001 TYP. SECTION DOOR OPENING

SCALE: 1/2" = 1'-0"

C S001 SECTION @ LOAD BEARING CMU WALL TYP. U.N.O.

SCALE: 1/2" = 1'-0"

D S001 SECTION TYPICAL WALL OPENING

SCALE: 1/2" = 1'-0"

SCALE: 1/2" = 1'-0"

SCALE: 3/16" = 1'-0"

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BUILDING REPLACEMENT PROJECT FOUNDATION PLAN AND DETAILS

SAN JUAN — LUIS MUNOZ MARIN INTL AIRPORT — PR

REVIEWED BY	SUBMITTED BY	APPROVED BY
	Neil Bolen, PROJECT ENGINEER	Robert S. Bradley, MGR: ENGINEERING - ATLANTA

DESIGNED	NB	ISSUED BY	DATE	04/17/2010	JCN	1000073
DRAWN	DS	ENGINEERING SERVICES SURV/WEATHER	DRAWING NO	SJU-D-1000073-S001		REV
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GENERAL NOTES

A. GENERAL:

1. APPLICABLE CODES - LATEST EDITIONS OF:

   INTERNATIONAL BUILDING CODE 2006
   ASCE 7-05 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
   ACI 318-05 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
   STEEL DECK INSTITUTE STANDARD PRACTICE DETAILS SPO2
   ACI 530-05 / ASCE 5-05 / TMS 402-05 BUILDING CODE REQUIREMENTS FOR MASONRY

2. DESIGN LIVE LOADS: NOT TO BE REDUCED:

EQUIPMENT AREA FLOORS	150 PSF
TYPICAL FLOORS, U.N.O.	100 PSF
ROOF	30 PSF
CONCENTRATED LOAD ON TREADS	300 LBS/4 SQ. IN.

   WIND: BASIC WIND SPEED 145 MPH, EXPOSURE C. IMPORTANCE FACTOR 1.15
   BUILDING CATEGORY: IV
   INTERNAL PRESSURE COEFFICIENT, GCPI: 35/64 0.18
   COMPONENTS AND CLADDING PRESSURES: (+) 21.43 PSF ( )
   (-) 72.20 PSF ( )
   OVERHANG 181.00 PSF ( )

   BASIC STRUCTURAL SYSTEM: ORDINARY REINFORCED CONCRETE SHEAR WALLS

3. SOILS: FOUNDATIONS ARE DESIGNED TO BE SUPPORTED BY SPREAD FOOTING AN ALLOWABLE SOIL BEARING PRESSURE OF 1000 POUNDS PER SQUARE FOOT. SOIL BEARING CAPACITY SHALL BE VERIFIED BY A REGISTERED SOILS ENGINEER AT THE TIME OF EXCAVATION. ELEVATIONS GIVEN IN SPECIFICATION ARE FOR PURPOSES OF CONTRACT AND SHALL BE ADJUSTED AT THE TIME OF EXCAVATION TO MEET ACTUAL SITE CONDITIONS.

   THE SOILS ENGINEER OR SOILS ENGINEER'S REPRESENTATIVE SHALL INSPECT ALL SUBGRADE PREPARATION WORK PRIOR TO PLACEMENT OF ANY REINFORCING STEEL OR CONCRETE.

4. EXCAVATION: CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, DEWATERING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS, AND UTILITIES IN ACCORDANCE WITH THE LOCAL BUILDING DEPARTMENT.

5. DISCREPANCIES: CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, AND ELEVATIONS AT JOB SITE AND BRING TO THE ATTENTION OF FAA RESIDENT ENGINEER ANY DISCREPANCIES.

6. OTHER TRADES: SEE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF PIPE, VENT, DUCT, AND OTHER OPENINGS AND DETAILS NOT SHOWN ON THESE STRUCTURAL DRAWINGS. ALL DIMENSIONS ARE TO BE CHECKED AND VERIFIED WITH THE ARCHITECTURAL DRAWINGS.

B. STRUCTURAL SYSTEM: ORDINARY MASONRY REINFORCED SHEAR WALLS

C. BUILDING ERECTION:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND PROVISION OF ALL TEMPORARY GUYS, BRACING, AND OTHER SUPPORTS AS NEEDED TO SAFELY RESIST ALL LOADS TO WHICH STRUCTURE MAY BE SUBJECTED, INCLUDING LOADS FROM ERECTION EQUIPMENT AND OPERATIONS, AND ALL WIND OR SEISMIC FORCES COMPARABLE IN INTENSITY FOR WHICH STRUCTURE WAS DESIGNED.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND PROVISION OF ALL SHORING REQUIRED FOR TEMPORARY EARTH RETENTION. DESIGN OF SUCH SHORING SHALL BE BASED ON LATERAL EARTH PRESSURES GIVEN IN THE SOILS REPORT.

3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THE WORK AT THE JOB SITE.

D. CONCRETE CONSTRUCTION

1. ALL CONCRETE SHALL ATTAIN A MINIMUM 28-DAY COMPRESSIVE STRENGTH AS INDICATED BELOW AND A MAXIMUM UNIT WEIGHT OF 150 PCF, UNLESS NOTED OTHERWISE:

FOUNDATION	4,000 PSI
SLAB ON GRADE (S.O.G.)	3,000 PSI
ELEVATED CONCRETE SLAB	3,000 PSI

2. MIXING AND PLACING OF ALL CONCRETE AND SELECTION OF MATERIALS SHALL BE IN ACCORDANCE WITH ACI 301 AND 318. CEMENT SHALL CONFORM TO ASTM C150. ALL CEMENT AND AGGREGATE FOR EXPOSED CONCRETE SURFACES SHALL BE OF THE SAME TYPE FROM THE SAME MANUFACTURING PLANT. REFER TO SPECIFICATION FOR ADDITIONAL REQUIREMENTS. PROVIDE AIR-ENTRAINED CONCRETE FOR ALL CONCRETE EXPOSED TO WEATHER. MIX DESIGNS SHALL BE SUBMITTED TO RESIDENT ENGINEER PRIOR TO USE.

3. PREPARE AND SUBMIT FOR APPROVAL TO RESIDENT ENGINEER SHOP DRAWINGS FOR REINFORCING STEEL IN ACCORDANCE WITH ACI 318, "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT". MINIMUM CAST-IN-PLACE CONCRETE COVER OVER REINFORCING STEEL, UNLESS NOTED OTHERWISE SHALL BE:

CONCRETE CAST AND EXPOSED TO EARTH:	3"
CONCRETE EXPOSED TO EARTH OR WEATHER:	
#6 BAR OR LARGER:	2"
#5 BAR OR SMALLER:	1-1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER:	
SLABS & WALLS:	
#11 OR SMALLER	3/4"

4. PROVIDE A 3 TO 4-INCH THICK MUD MAT OF LEAN CONCRETE BENEATH ALL BEARING SURFACES TO PROTECT BEARING SOILS IF EXCAVATION REMAINS OVERNIGHT OR IF RAIN IS IMMINENT.

5. WHERE THE WEIGHT OF EQUIPMENT OR MATERIALS BEING TRANSPORTED TO LOCATION OR TEMPORARILY STORED EXCEEDS THE DESIGN LIVE LOAD, PLANKING SHALL BE PROVIDED ON THE FLOOR SLAB AND SHORING PROVIDED BENEATH THE FLOOR.

6. NO ALUMINUM CONDUITS OR PIPES SHALL BE EMBEDDED IN CONCRETE WITHOUT AN APPROVED COATING. THE USE OF ALUMINUM PIPES OR CHUTES TO TRANSPORT CONCRETE WILL NOT BE PERMITTED.

7. PROVIDE PIPE SLEEVES AND INSERTS IN CONCRETE PER MECHANICAL, FIRE PROTECTION AND ELECTRICAL DRAWINGS AND SPECIFICATION. MAINTAIN A MINIMUM OF 1-INCH CLEARANCE BETWEEN ALL PIPE SLEEVE AND BAR SPACE BLOCKOUTS OR PRECAST INSERTS. PROVIDE 4 ADDITIONAL #5 REINFORCEMENT BARS EVENLY DISTRIBUTED AROUND A SLEEVE AT EACH FACE OF WALL WHEN OUTSIDE DIAMETER OF SLEEVE EXCEEDS 8-INCHES. MINIMUM SLEEVE ON CENTER SPACING IS 4 TIMES THE SLEEVE DIAMETER.

8. PROVIDE CONCRETE HOUSEKEEPING PADS OR FOUNDATIONS FOR MECHANICAL, FIRE PROTECTION, AND/OR ELECTRICAL EQUIPMENT. VERIFY NUMBER, SIZE, AND EXACT LOCATIONS OF PADS WITH RESPECTIVE SUBCONTRACTOR PRIOR TO INSTALLATION. INSTALL ALL BUILT-INS FURNISHED BY THE SUBCONTRACTORS OR INDICATED ON THE DRAWINGS.

9. CONSTRUCTION JOINTS: ADDITIONAL CONSTRUCTION JOINTS OTHER THAN SHOWN SHALL HAVE PRIOR APPROVAL OF RESIDENT ENGINEER BEFORE INSTALLATION.

10. PENETRATIONS: PENETRATIONS OTHER THAN SHOWN SHALL NOT BE ALLOWED WITHOUT PRIOR APPROVAL OF RESIDENT ENGINEER.

E. REINFORCING STEEL:

1. REINFORCING STEEL PROVIDED IN THE ABOVE REFERENCED SHOP DRAWINGS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

   REINFORCING STEEL, TYPICAL ASTM A615, GRADE 60, FY = 60 KSI
   WELDED WIRE FABRIC (WWF), ASTM A185, FY=65 KSI

2. WELDED WIRE FABRIC SHALL ONLY BE FLAT SHEETS.

3. REINFORCEMENT INCLUDING WELDED WIRE FABRIC SHALL BE POSITIVELY SUPPORTED IN THE POSITION SHOWN ON THE DRAWINGS AND SHALL BE MAINTAINED IN THIS POSITION DURING THE PLACEMENT OF CONCRETE.

4. ALL WELDED WIRE FABRIC SHALL BE LAPPED AT LEAST 12 INCHES. ALL REINFORCEMENT BAR LAPS SHALL CONFORM TO ACI CLASS "B" LAP REQUIREMENTS. STAGGER SPLICES WHEREVER POSSIBLE.

E. REINFORCING STEEL (CONT.):

5. BAR SPLICES: ALL DOWEL AND LAP LENGTHS SHALL BE AS GIVEN IN ACI 318-05 UNLESS NOTED OTHERWISE. CONTRACTOR SHALL PREPARE LAP SPLICE TABLE AND SUBMIT TO RESIDENT ENGINEER FOR APPROVAL PRIOR TO ANY FIELD PLACEMENT OR REINFORCEMENT.

6. CONCRETE SHEAR ANCHORS SHALL CONFORM TO A.W.S. D1.1, TYPE B REQUIREMENTS FOR STANDARD HEADED STUDS. FY = 60 KSI.

F. MASONRY

1. STANDARD HOLLOW CONCRETE BLOCK SHALL CONFORM TO ASTM C90 EXCEPT THAT THE MAXIMUM MOISTURE CONTENT SHALL NOT EXCEED 50% OF THE TOTAL ABSORPTION. COMPRESSIVE STRENGTH (f'm) OF 2000 PSI.

2. MASONRY MORTAR SHALL CONFORM TO ASTM C270 AND BE TYPE M. GROUT SHALL CONFORM TO ASTM C476 WITH MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI.

3. INSPECTION OF MASONRY UNITS ARE REQUIRED AS PER SPECIFICATION.

4. HEIGHT OF GROUT LIFTS SHALL NOT EXCEED 4'-0". MASONRY UNIT SHALL BE LAID SO AS TO PROVIDE UNOBSTRUCTED VERTICAL CONTINUITY OF GROUT SPACE.

5. MASONRY MORTAR SHALL CONFORM TO ASTM C476 WITH MINIMUM COMPRESSIVE STRENGTH (f'm) OF 2000 PSI.

6. INSPECTION OF MASONRY UNITS ARE REQUIRED AS PER SPECIFICATION.

7. 9 GAUGE LADDER-TYPE REINFORCING SHALL BE PROVIDED AT MAXIMUM OF 16" O.C. VERTICALLY U.N.O.

L. COLD FORMED LIGHT GAGE METAL FRAMING:

1. ALL COLD FORMED LIGHT GAGE METAL FRAMING SHALL BE DESIGNED AND SUPPLIED BY THE CONTRACTOR FOR ALL GRAVITY, LATERAL, AND OTHER LOADINGS INDICATED BY BUILDING MATERIALS SHOWN ON ARCHITECTURAL DRAWINGS AND DESIGN LOADINGS NOTED ON SOOO. DESIGN SHALL BE DONE IN ACCORDANCE WITH PROVISIONS OF THE LATEST EDITION OF THE AISI "DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" EXCEPT THAT DEFLECTIONS SHALL BE CALCULATED USING FULL LOADS INSTEAD OF REDUCED LOADS.

2. SHOP DRAWINGS AND SUPPORTING CALCULATIONS FOR COLD FORMED METAL FRAMING SHALL BE SEALED AND SIGNED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.

M. ALUMINUM ANCHORS, SHAPES, AND CONDUITS:

1. WHERE ALUMINUM ANCHORS, ALUMINUM SHAPES, OR ALUMINUM ELECTRICAL CONDUITS ARE EMBEDDED IN CONCRETE, ALL CONTACT SURFACES SHALL BE PAINTED WITH ZINC-CHROMATE PRIMER. PAINT SHALL BE ALLOWED TO DRY THOROUGHLY BEFORE ALUMINUM IS PLACED IN CONTACT WITH THE CONCRETE.

2. ALUMINUM SURFACES TO BE PLACED IN CONTACT WITH CONCRETE, WOOD, OR MASONRY CONSTRUCTION, EXCEPT WHERE ALUMINUM IS TO BE EMBEDDED IN CONCRETE, SHALL BE GIVEN A HEAVY COAT OF AN ALKALI-RESISTANT BITUMINOUS PAINT BEFORE INSTALLATION. PAINT SHALL BE APPLIED AS IT IS RECEIVED FROM THE MANUFACTURER WITHOUT THE ADDITION OF ANY THINNER.

COORDINATION WITH OTHER TRADES

1. PROVIDE OFFSETS AND TRANSITIONS AS REQUIRED TO COORDINATE WITH OTHER TRADES.

2. PENETRATIONS THRU PRECAST CONCRETE: FOR PENETRATIONS LESS THAN OR EQUAL TO SIX INCHES-NEATLY CORE DRILL. FOR PENETRATIONS GREATER THAN SIX INCHES-COORDINATE WITH STRUCTURAL PRECASTER.

3. PENETRATIONS THRU FLOOR GRATING: NOT ALL PENETRATIONS ARE SHOWN. FIELD CUTTING IS PERMISSIBLE. REINFORCE GRATING PER THE STRUCTURAL DETAILS.

4. FIRE WALL PENETRATIONS: SEE SPECIFICATIONS FOR REQUIRED FIRESTOPPING INSTALLATION.

5. EQUIPMENT PADS: SEE MECHANICAL DETAILS FOR TYPICAL EQUIPMENT PADS.

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DEPARTMENT OF TRANSPORTATION
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ATO - TECHNICAL OPERATIONS EASTERN SERVICE AREA

ASR
BUILDING REPLACEMENT PROJECT
STRUCTURAL
GENERAL NOTES

SAN JUAN LUIS MUNOZ MARIN INTL AIRPORT PR

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	PROJECT ENGINEER	MGR: ENGINEERING - ATLANTA	
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